



## **Sustainability as competitive advantage**

### **Validation of Compliance**

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# IFRO Commissioned Work



## Sustainability as competitive advantage – Validation of Compliance

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**IFRO Commissioned Work 2018/16**

Sustainability as competitive advantage – Validation of Compliance.

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## Preface

Danish farmers and food companies are to an increasing extent being asked by international customers to document various aspects of sustainability. Few companies are able to deal proactively with this demand, while others are finding it harder to find the required resources to carry out the documentation. As a response, the Danish Ministry of Environment and Food (MFVM) is, in cooperation with the Danish Agriculture and Food Council, launching an initiative that will reduce the administrative burdens that are imposed on the Danish food sector in relation to the documentation of what they do related to sustainability.

The initiative involves a Danish web tool based on the Trade for Sustainable Development (T4SD) programme and the existing web tool Sustainability Map created and managed by the International Trade Centre in Geneva. Danish legislation has been added to a database consisting of sustainability standards, thereby making it possible for Danish companies to assess and document their performance vis-à-vis sustainability standards and audit questions from international customers based on compliance with Danish legislation and other standards. In order to validate and improve the understanding of the control efforts that supports compliance with Danish legislation in the food sector, this report assesses the compliance control efforts carried out by the Danish public authorities. The report includes the following items:

- 1) A description of relevant control and enforcement programmes run by the Danish authorities, including a cross-reference of criteria and processes included in the Sustainability Map database and covered by the control and enforcement programmes.
- 2) A general presentation of the extent of the control efforts and the results of the control.
- 3) A discussion and assessment of the value and benefits for Danish food companies and the food sector in general of the control and enforcement programmes.
- 4) A description and discussion of a functionality in the Danish web tool that allows Danish companies to integrate public audit reports, i.e. compliance results, in their profiles and use them in their communication with customers.

The report is based on interviews with representatives of the control units in the different public authorities, surveys of and interviews with Danish food companies and a literature review. The authors appreciate the willingness of companies and public authorities to participate in interviews and answer questionnaires.

# 1. Background and purpose

Documentation of various aspects of sustainability is to an increasing extent becoming everyday business for the Danish food sector. Only few of the larger Danish companies are able to deal proactively with this demand, while others are finding it hard to retrieve the resources to document aspects of sustainability that are required by international customers. It was one of the main conclusions from a workshop at the Danish Agriculture and Food Council in February 2015.

As a response to that conclusion, the Danish Ministry of Environment and Food, in cooperation with the Danish Agriculture and Food Council and in collaboration with companies, such as Danish Crown and Arla Foods, is launching an initiative that will reduce the administrative burdens imposed on the Danish food sector in relation to documentation of what they do in relation to sustainability. The initiative includes a number of projects. The first project “Sustainability indicators and targets” collects and calibrates the rigorous Danish regulation and industry codes with the procurement policies of multinational companies and branch initiatives that are imposed on Danish companies. For a start, focus has been on the two major food branches pig production and dairy production. More branches will be added continuously. The information is added to the Trade for Sustainable Development (T4SD) standards database and is made available online via the Sustainability Map tool, developed and managed by the International Trade Centre (ITC) ([www.sustainabilitymap.org](http://www.sustainabilitymap.org)). The second project “Communication and benchmarking” includes a Danish version of a benchmarking tool based on the Sustainability Map that allows Danish companies to compare their sustainability initiatives against various international sustainability codes / private standards.

The third project “Validation of compliance”, which is the focus of this report, focuses on public control and compliance efforts and how Danish authorities can add validation to Danish claims regarding sustainability. Thus, the third project is closely related to the first and second project, briefly described above. The validation may add value to claims made by Danish companies and possibly reduce or otherwise support the audits by international customers e.g. Walmart, McDonalds, Nestlé, Unilever, PepsiCo etc. Companies operating in Denmark perform sustainability activities in the broader sense due to the fact that they follow Danish regulations and are subjected to governmental control and enforcement programmes, e.g. concerning use of inputs, animal welfare, labour conditions, and food quality.

## **Purpose**

This report documents the findings from the third project, which has the following objectives:

- 1) Assess and describe the compliance control and enforcement programmes run by the Danish authorities
- 2) Describe the extent and results of the compliance control programmes
- 3) Discuss the benefits of the control efforts to Danish food companies and the food sector in general
- 4) Describe the possible feature of the Sustainability Map web tool to integrate compliance audit reports on user profiles for improved communication with international customers.

The overall purpose is to create the basis for making a “compliance-code” available on the Danish sub-page to the Sustainability Map. By this “compliance code”, a food company operating in Denmark will be able to retrieve trustworthy documentation about the scope of Danish control and enforcement programmes, and also general information about the effects and results of national control and enforcement programmes. A

strong validation of the documentation is governmental acknowledgement and recognition, though without direct approval or certification.

### ***Methodology***

This report is based on interviews with actors in the Danish food sector, carried out from November 2016 to February 2017, follow-up communication with actors, and review of literature as well as an internal screening of control programmes carried out by public offices. A list of export-oriented food companies in different industries were made, based on contacts with companies from earlier and ongoing projects at IFRO as well as with the help of the Danish Agriculture and Food Council. Initially, 29 large and smaller companies were contacted within the following industries: dairy, slaughter houses (pigs, poultry, beef), eggs, plants and vegetables, grain and feed, fisheries and aquaculture, beer brewery, and a number of food processing companies delivering directly to retail. The companies were initially contacted via phone and subsequently they received a list of questions for a following phone interview. The questions could also be answered in writing. The questions concerned the companies' experiences with the Danish public compliance control, positive and negative, and how the control and the public audits overlapped, and possibly supported, the private audits by international customers.

Interviews were also conducted with representatives from Danish food organisations, the Danish Agriculture and Food Council and DI Food, and with representation of five public agencies under the Danish Ministry of Environment and Food in charge of developing and carrying out activities in the control programmes. The same agencies were also asked to review excerpts of issue areas in the T4SD standards database and indicate which issue areas were covered by the control programmes of the respective agencies. Finally, a literature review was carried out, including scientific articles, online reports and databases from the agencies and the EC Sante F reports.

## **2. The Danish control programmes for legal compliance in the food sector**

### **2.1 The story of Danablu**

In 1927, Marius Boel, a young Danish dairyman, was the first to produce a blue cheese made from homogenised milk, thereby substantially increasing the quality of the blue cheese. The method of homogenising cheese-milk rapidly became the standard procedure, and both the demand for and the number of producers of blue cheese increased considerably throughout the 1930s. In order to maintain the high quality of the blue cheese, especially for the important export markets, the producers asked the governmental control unit at the time to establish regular quality control of the blue cheese produced for the export market. A producer association was established and made responsible for creating a detailed control system, which described the requirements for production processes as well as quality characteristics. After negotiations with the Ministry of Agriculture and the governmental control unit, the control system was included into the law in 1936; “Regulations for the evaluation of cheese of the Roquefort type by the State’s Cheese Evaluations”. In 1952, the blue cheese was officially given its name Danablu.

If not the first example, the story of Danablu is a good example of how governmental regulations and compliance control supported the production of standardised high quality food products for the export markets. Without the regulations and compliance control, the quality and thus the export value was believed to be in jeopardy. In 2011, Danablu was registered with Protected Geographical Indication (PGI) according to EC regulation no. 510/2006. Where the Danish regulations guarded the high quality standard of the blue cheese production in Denmark, the PGI registration protects Danablu from dairy producers in other countries trying to imitate or counterfeit the specific qualities of the Danish blue cheese and its brand (EC 2012/C 150/08).

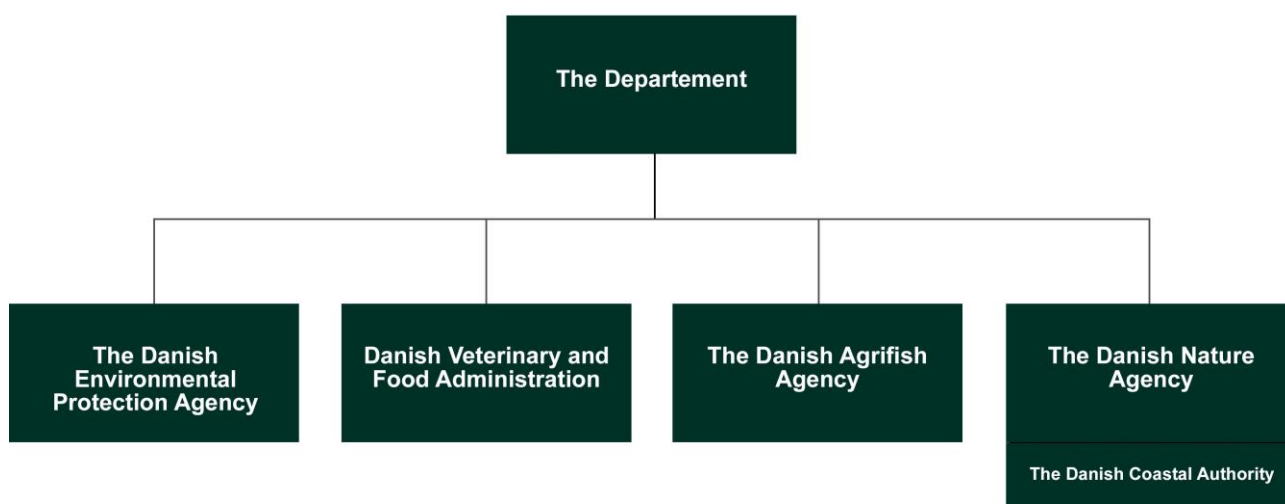
### **2.2 The Danish national control programme**

Since the regulations regarding the production and quality of Danish blue cheese were implemented, countless regulations with a similar aim to regulate food production has been written and implemented. The broader aim of the regulations has moved from product quality, in the sense of consumers’ organoleptic experiences as in the case of blue cheese, to a plethora of aspects somehow linked to quality; food safety, environmental care, animal welfare and health, product traceability, etc. As such, the programme of control and enforcement of food regulations that is run by the Danish authorities today has gone through an expansive development over a long time.

The official national control plan, which is currently running from 2017 to 2021 and prepared in accordance with the EC control regulation section 5 (No. 882/2004), is directed towards firms, agriculture, animal welfare and fisheries, and their compliance with the law (FVST, 2017). The 882/2004 regulation has since been updated and will be replaced by the Official Controls Regulation (EU) 2017/625 after a transition period, possibly making it necessary to adjust the national control plan accordingly. In The Food and Agriculture Package from 2015, it was decided to create a joint control strategy for the ministry. It creates more uniform conditions for the firms and is also contributing to a more sustainable agriculture and fishery, with a broader focus on animal welfare. Food safety is a significant factor in relation to public health. Another important



class of food safety issues is associated with the use of purchased inputs such as fertilizers and pesticides for crop production, and feed and drugs for animal production. Quality and safety standards can be used not only for legitimate health and safety regulation but also as non-tariff barriers to restrict trade and international competition (Antle, 2001). The national control plan includes specific plans and different quality management systems. According to the national control plan, the competent authorities are the Danish Veterinary and Food Administration, the Danish Agriculture Agency, and the Environmental Protection Agency, all under the Department of the Ministry of Environment and Food, as well as the Ministry of Foreign Affairs, the Health Agency, SKAT (tax authorities), and the Danish Police as a controlling authority. Four of the agencies, which are all under the Danish Ministry of Environment and Food, are responsible for the compliance control efforts described in this report. However, additional public agencies and authorities under the Ministry play minor roles in the control plan (Fig. 2.1).



**Figure 2.1.** *The Department of the Ministry of Environment and Food, the four agencies, and the Danish Coastal Authority (MFVM n/d)*

Each of the included agencies and administrations in the national control programme has its own specific areas of interest. This section provides an overview and description of the tasks and responsibilities of the different agencies in the control programme. A description of the Danish Working Environment Agency is also included, as this agency carries out compliance control of regulations regarding working conditions, which are also an important element in international standards for food production and a topic in the audit questions from international customers on the Danish export markets. There are many additional and minor control areas in the national programme; however, they will not be further elaborated as they have less relevance for the scope of this report.

There are different approaches to the control efforts implemented in order to fulfil the goals of the national control plan. Within the food sector, there are different types of risk assessments for different industries. There is the ordinary control in industries according to different industry groups: Wholesale with and without processing, retail with wholesale, and retail, which is determined based on a risk assessment system whereby branches of control objects are divided into risk groups. Each risk group is associated with a standard

frequency of basic controls, which are carried out using audits, inspections, monitoring, physical control visits, administrative controls, sampling, analysis and verification.

In the control of export-oriented products, the Veterinary and Food Administration is distinguishing between the different export markets for food products, live animals, breeding material and by-products. The administration creates certificates to individual countries as needed and at the request from different sectors. There are different requirements for the individual countries. Both the Veterinary and Food Administration and the Danish Agricultural Agency are responsible for updating and adapting the Danish national control plan. Besides the national control plan, each agency has its own strategy for the control and enforcement activities. In October 2017, a new common strategy was launched in collaboration between the Veterinary and Food Administration, the Danish Agricultural Agency, The Environmental Agency and the Agency for Water and Nature Management (cf. section 2.9). Based on this common strategy, each agency will develop and implement its own action plans.

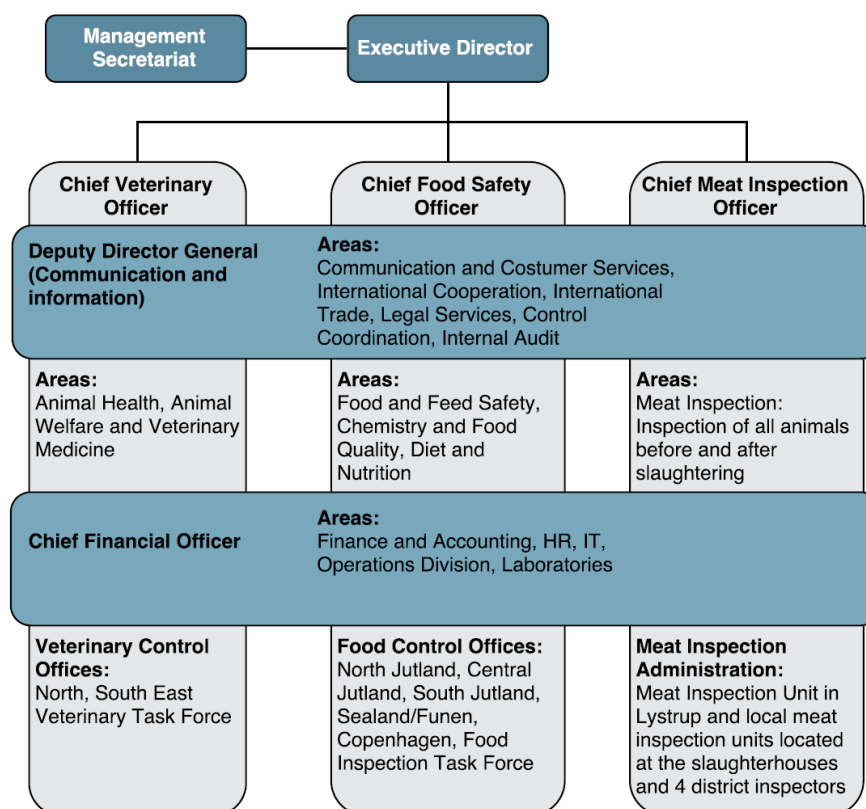
The following descriptions of each agency are based on interviews with representatives of the agencies, the national control plan 2017-2012 (FVST, 2017), internal screenings and online resources mainly from the websites of each agency<sup>1</sup>. A description of the Danish control programme and of the competent authorities and their responsibilities in relation to the individual control systems can also be found in DG(Sante) (2018).

## **2.3 The Danish Veterinary and Food Administration**

The Danish Veterinary and Food Administration is run by a director and consist of three specialised business areas; the Veterinary area, the Food area and the Meat inspection area, and two transverse business support areas: Customer and Development Area and the Economic Region, which also includes the laboratory work (see Fig. 2.2). The administration ensures, that companies working within the industries of food products, feed, animal welfare and animal health, comply with legal regulations. Therefore, the control itself is divided into three areas for food companies, feed companies and livestock farms. Around 86,000 controls were carried out in 2015 across the three areas and 68,400 were actual physical controls.

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<sup>1</sup> From August 2017, a new organisation of the ministry has been established and some of the agencies have been divided or otherwise adjusted in their organisation, e.g. the former AgriFish Agency has been divided into an Agricultural Agency and a Fishery Agency. However, the division has not yet been implemented fully, e.g. public online resources and links still refer to the AgriFish Agency. In terms of the reporting on control work, this report takes departure in the original structure as the most recent, available data on control efforts and results are from before the organisational change.



**Figure 2.2.** The organisation of the sections in charge of inspections at the Danish Veterinary and Food Administration (DVFA n/d)

The inspection is organised in three main offices: veterinary, food safety and meat inspection. The offices each have specific areas in which they perform inspections. All offices have units all over Denmark; moreover, the meat inspection office has local inspection units at the slaughterhouses. Besides the three main inspection offices, there is also a financial office and a directorate for growth and innovation that oversees communication, international cooperation, export promotion etc.

For food companies that are working in the food production industry, relevant control schemes include control of the interior, hygiene (food security), organic production, labelling, financial support and self-auditing programmes. The companies need to have a self-auditing system to continuously ensure that the products they produce and market are in compliance with the regulations and that products are not harmful to human health. During a control visit, the authorities assess all registrations, which are part of the self-auditing programme.

Control of livestock is appointed based on data from The Central Livestock Register (CHR – Centrale Husdyrbrugsregister). There are three different types of controls; zero control, priority control and campaign control. If a livestock is appointed to a zero or priority control, there is a number of different topics, which will be assessed:

- Animal welfare, including self-auditing programmes
- Use of medication
- Animal health and hygiene
- Marking and registration of cattle, sheep, goats and pigs.

In addition, there can be specific rules according to different livestock groups. On the other hand, if a livestock production is appointed for a campaign control it is specific, current issues, which are the campaign's focus points. It is the Veterinary and Food Administration that decides which areas and issues are in need of specific action (i.e. control) based on risk assessments.

Especially, the area of meat inspection has many different schemes. There are five annual audits of abattoirs. An ante mortem control (AM), is the control of the living animals and the focus is animal welfare and health. A post mortem control (PM), is carried out after the slaughter, where the focus of the control is food safety. In addition, there are regular controls of all deliveries from the abattoirs, which include transportation etc. The abattoirs have veterinarians and quality personnel employed specifically to handle the control-related work.

The veterinary control scheme includes control of animal livestock, veterinarians' medication, compliance with health agreements, DAKA (animal by-products not suitable for human consumption) and pet-food. However, there can also be controls on import of hunting trophies; though, in this context mainly in relation to sanitation (rather than possession of rare species) as the administration wants to prevent import of diseases.

The agency is also responsible for the prevention and control of animal diseases in Denmark. A healthy livestock sector and a fast reaction in the case of a suspicion of an outbreak is crucial to ensure healthy food products, avoid contamination to humans, ensure food export and sustain the economy of the farmers. Two lines of defence in the animal disease preparedness programme are first an effective surveillance of clinical diseases for early detection of outbreaks, and second, inspection of all animals at assembly centres for production, slaughter or export by an official veterinarian. Above all, it is the responsibility of the livestock owner to be aware of the health status of the animals and call the veterinarian in case of suspicion of a so-called notifiable disease (List 1 – diseases which are the more severe diseases), which means that the owners will receive fines for not reporting in case of diseases. All suspected cases of notifiable diseases are registered in a publicly available database and are handled according to a system of so-called action cards, which list all necessary actions to be taken during the handling of a suspected case.

The administration controls all registered or certified feed companies for their compliance with the feed hygiene regulations. The feed companies are responsible for ensuring that their specific processes and products fulfil the statutory requirements. At the same time, they are responsible for having an updated and efficient quality management system. It is not only feed companies that undergo control visits, but also agricultural companies where it may be relevant to control compliance with feed hygiene regulations.

The different control schemes have certain procedures in common. Before the control visit, all papers from previous assessments are examined and the responsible staff at the administration, which will carry out the control visit, must identify the main relevant features of the company. The company is then paid a control visit without being noticed in advance, and all aspects that may be subject to compliance control for the specific type of company will be assessed. From time to time, there are priority focus areas for the control – also called campaign controls. In case of infractions by food or feed companies or livestock farms, there are different sanctions such as recommendations, warnings, injunction, prohibition, fines, penalty payments, police reporting, self-help and escalation.

The number of annual visits per year is determined on the basis of a risk assessment at the specific industry level and a needs assessment for each food company. From the 1st of January 2017, the risk-based assessment will no longer be based on the type of company, but rather on the type of activities, the company is involved in. Two firms of the same type, e.g. a bakery, may perform various specific activities, e.g. bread baking from flour or only bake-off, and therefore the risk-based analysis may result in different risk profiles and thus different scope of the control visit. This new strategy will apply for both the food and feed sector.

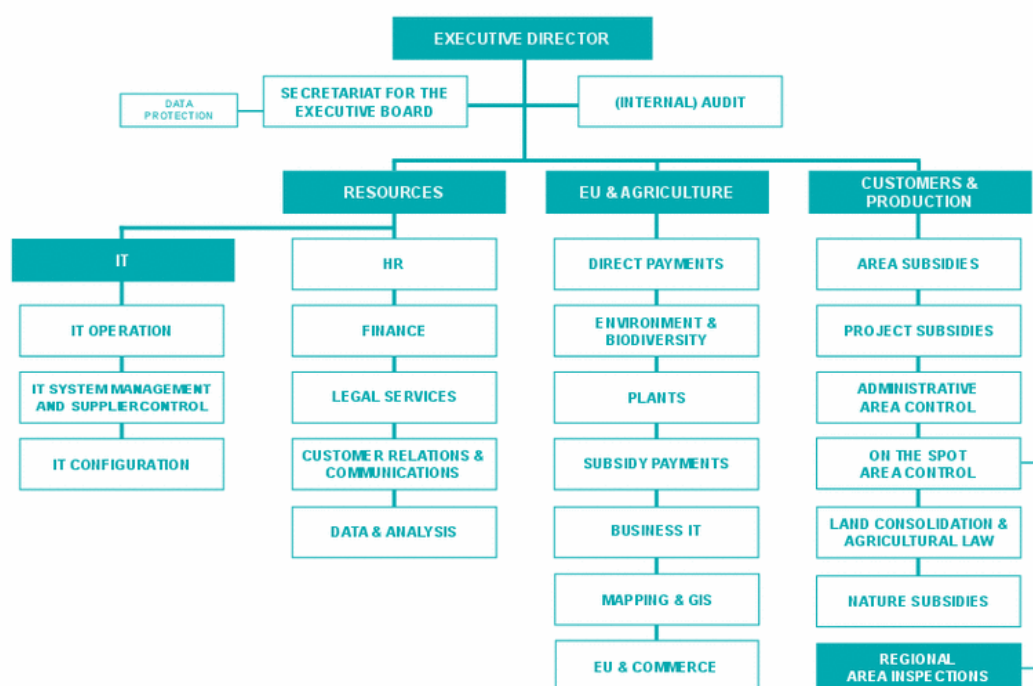
Around 95 per cent of the laws and regulations that the Veterinary and Food Administration's control work is based on, are derived directly from the EU regulations. The remaining 5 per cent are national control areas related to specific national regulations.

In order to ensure the quality of the control work carried out by the Veterinary and Food Administration, a unit of internal audit has been created. The unit carries out audits according to the programme tasks, including interviews, review of documents and participation in and observation of inspections. The unit of internal audit reports to the direction, which ensures that plans are developed and implemented according to audit results. The unit follows up on the action plans and assesses their suitability.

Besides control tasks related to the food and feed hygiene regulations, the administration is working closely with The Danish Agricultural Agency regarding the development and national implementation of financial support schemes, derived from the common EU agricultural policy. This is related to control of compliance with the so-called cross-compliance order.

## **2.4 The Danish Agricultural Agency**

The Danish Agricultural Agency is managed by an executive director and consists of three fields: Resources, EU and Agriculture, and Customers and Production (see Fig. 2.3). All inspections regarding agriculture and – according to the current (April 2018) online description – fisheries are performed by this agency. The unit *On the spot area control* plans and manages inspections in the area of agriculture and companies. The Mapping and GIS unit performs all EU-related area control and GIS analysis. Data and Analysis provides risk analysis, secures data and provides relevant information. The agency has developed a strategy that will ensure the future development of the agency and an increasing growth in the industry through sustainable development of nature. In 2015, there were about 22,000 reported controls and 9,100 were physical controls. The Fisheries control unit, which is now in the new Fishery Agency (see section 2.5) develops plans and coordinates inspection of fishing vessels, catches and landing harbours.



**Figure 2.3.** The Danish Agricultural Agency (DAA n/d)

The main task within the agency is to manage the 9 billion EUR a year in EU subsidies. The agency administrates more than 100 financial support schemes, where the basic payment to the farmers is largest. More than 80 per cent of the funds come from the EU, while the Danish government pays the rest. Therefore, it is mainly EU regulations and directives that are followed. The agency also controls compliance with the national nitrate regulations.

The areas of compliance control under the responsibility of The Danish Agricultural Agency include:

- Control of farming areas
- Plant Health
- Organic Agricultural production
- Land Users use of pesticides
- Parts of the sanitation control in primary production (agriculture)
- Commissioned by the cross-compliance control.

The agency applies different types of control: random control visits, commissioned controls, standard controls according to fixed frequency, risk-based controls, and campaign controls.

A large part of the control efforts consists of guidance to companies, which is provided in a broad and concrete perspective. The guidance can be online on their website, by annual information meetings, direct contact and during inspections. All of the methods are included in the agencies national control strategy. Random checks are implied by a subset of the total control sampling, typically 1-10 per cent. Of the producers and companies, which are included in the area support scheme, five per cent are controlled by random sampling, while only one per cent under the cross-compliance order are assessed, also by random sampling.

The selection is based on a risk analysis, which makes the control work more efficient. The commissioned control often applies to fee-funded areas such as control of plants.

All certified organic farmers or producers who deliver organic products are subject to fixed frequency controls. In this area, there is a requirement of an annual inspection in order to obtain the EU support by EU legislation. At the same time, a random selection is based on a risk model that includes: the company's past violations, the type of company, type of livestock on the farm and the size of the farm. Similarly, a risk-based approach to control is also applied in the pig production. The risk assessment in this case is based on former experiences with individual livestock farms and companies.

The control carried out by the agency ensures that regulations concerning production and trade of agricultural products will be respected. It also controls if the use of agricultural inputs, e.g. pesticides, and their possible environmental impact is complying with legal regulations. Furthermore, the requirements for farms to receive EU financial support, such as in the cross-compliance order for the area support scheme, are being audited by the agency. There are around 3,500 controls every year, related to the EU support schemes of area control. In 2015, there were 40,800 applicants for the area support.

It is the agency's task to control conventional farmers and companies, and organic farmers and companies that supply the organic primary producers e.g. feed companies and plant exporters. The agency has a control visit of the organic production companies at least once every year. In 2015, there were close to 3,500 controls concerning organic production. At the same time, the control of plants mainly includes horticultural holdings, seed companies and potatoes. It also includes control of import and export of plants outside of the EU, such as flowers. There are 2,000 to 3,000 controls every year. In 2015, the agency conducted close to 10,000 physical controls. However, the national control plan refers to 12,000 yearly physical controls.

The agency has different possibilities of action, such as injunctions, prohibitions, fines, recommendations and warnings. However, it is also possible to withdraw or reduce the EU financial support. In the organic and plant production, it is possible for the control to discard entire deliveries. Organic producers may also risk redoing the process of converting to organic production, which may take up to two years.

## **2.5 Danish Fisheries Agency**

In August 2017, the area of fisheries was moved from The Ministry of Environment and Food to The Ministry of Foreign Affairs, where a new agency was created; the Danish Fisheries Agency, which consists of four committees (Commercial fishing committee, Mussel Committee, § 7 Committee and Dialogue Forum for Natura 2000, and Sea Strategy). The Danish Fisheries Agency is responsible for implementing the government's fishery policies, preparing new policies, carrying out control, forming public contingency plans, and participating in international collaborations. The sections in the national control plan 2017-2020 relating to fisheries will be adapted when the final organisation of the agency is in place. In the current national control, both agencies are associated with the Danish Ministry of Agriculture and Fisheries (FVST, 2017).

The main area of control is hygiene regarding fish:

- Hygiene control of fishing vessels and vessels harvesting live bivalve molluscs etc. The inspection does not include vessels authorised under the Food Law, or EU legal acts in the food sector (e.g. factory vessels)

- Hygiene control of physical landing conditions
- Checking the harvest and landing of bivalve molluscs
- Hygiene control of direct landings and even checking the first turn of the market fresh fish products

In the fishery sector, risk-based control is also used. Subjects for control are selected based on the characteristics of the fishing vessels and their expected ability to comply with regulations. The effort of enforcement is targeted vessels that score highest in the risk analyses. The agency performs 9,000 controls annually in this sector, which includes control of fishing quotas, of harbours, of different fishing vessels, and of recreational fishery.

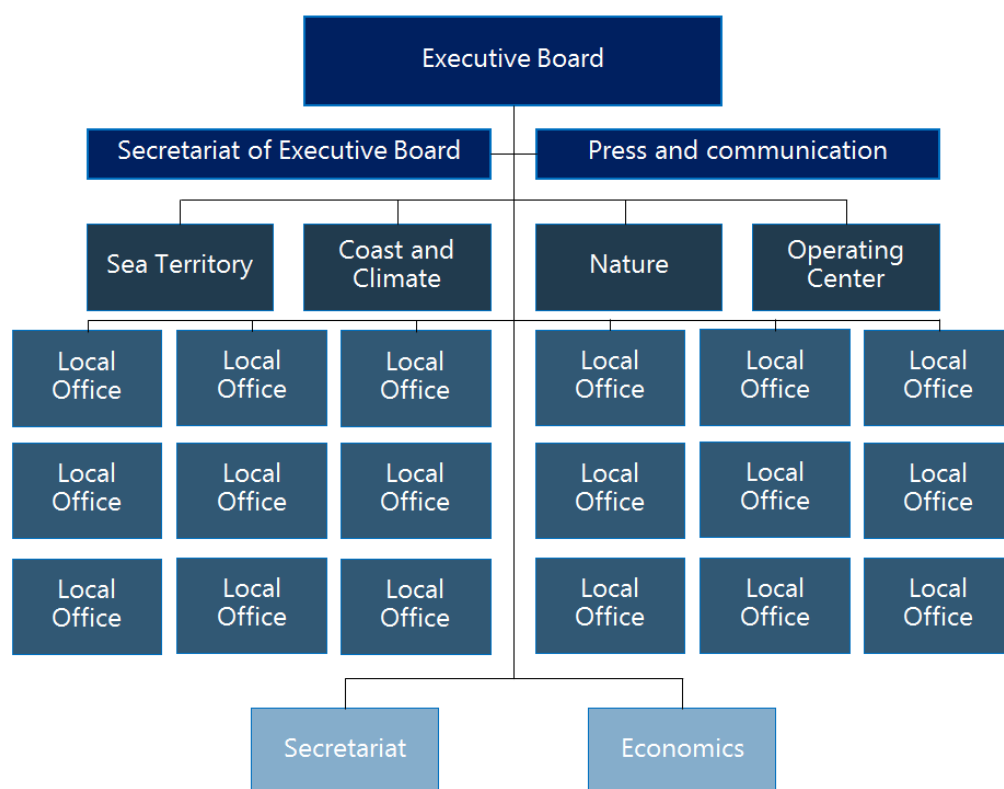
## **2.6 The Danish Nature Agency**

The Danish Nature Agency is managed by an executive board, and consists of four departments, including some that do not perform inspections. The Danish Coastal Authority is included in the agency.

The additional departments perform administrative control and inspections, while the decentralised units, which are situated all over Denmark, perform the physical inspections (see Fig. 2.4).

The agency is responsible for different control objectives. However, the majority of these are not directly related to the food sector. Among other tasks, the agency monitors forests and reforested areas and pays out subsidies for reforestation projects and to forest owners who implement certain management goals, such as increasing biodiversity or developing green management plans. Many forest owners also own farmland, and when a farmer applies for farm subsidies as well as reforestation subsidies, the agency carries out the area inspection in collaboration with the AgriFish Agency. The number of inspections of forests is set to a certain percentage of the forest subsidies, as stipulated by EU rules. Because of the Danish regulation of designating reforested areas as forest reserves, with a few exceptions, the agency also monitors that subsidised forested areas are not converted to farmland. Only 0-25 per cent of the agency's activities include control.





**Figure 2.4.** The Danish Nature Agency (AWNM n/d)

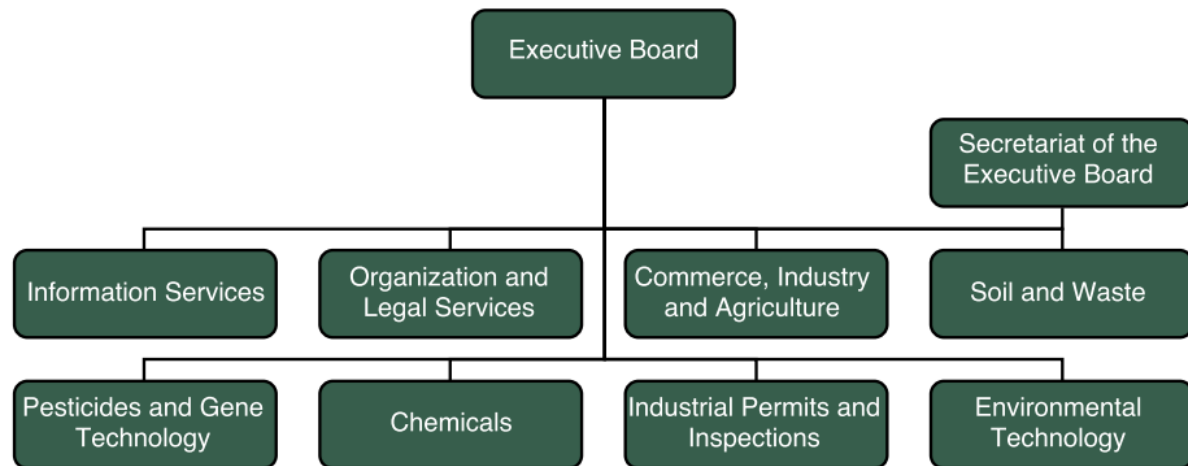
Though not related to agriculture or food production directly, the agency also inspects Denmark's approximately 650 wastewater treatment plants, which accept wastewater from households and industries, including agricultural industries. Different laws, which are enforced by the municipalities, cover this area: the Environmental Protection Act, the Order of Wastewater, the Water Framework Directive, the Environmental Objectives Act and the Act of Water Planning. In 2015, around 75 wastewater treatment plants were physically controlled.

The agency also carries out control of the trade with endangered species in Denmark. There are international rules for export and import of endangered animal and plant species. Unless these goods have a CITES<sup>2</sup> permit or is accompanied by a CITES certificate (within the EU), it is basically illegal to buy, sell or possess animals and plants that are endangered. Even items produced from endangered species are not legal to buy, sell or possess. The control is thus often a check for valid certificates. However, in 2015 there were less than five physical controls.

<sup>2</sup> The Convention on International Trade in Endangered Species of Wild Fauna and Flora

## 2.7 The Environmental Protection Agency

The Environmental Protection Agency is managed by an executive board, and consists of eight departments as well as the secretariat of the executive board (see Fig. 2.5). The Industrial Permits and Inspections Department oversees the environmental approval and inspections of polluting companies. The Commerce Industry and Agriculture Department performs the abovementioned tasks, the inspection of municipally owned waste plants and chemical inspections. The “Chemical Inspection” does not reveal the number of physical or administrative controls.



**Figure 2.5.** *The Environmental Protection Agency (EPA n/d)*

Local authorities must make sure that the regulations and orders based on the Environmental Protection Act and the Livestock Approval Act, comply with the law. In addition to controlling companies’ environmental conditions and enforcing the regulations, inspections can at the same time serve as inspiration and guidance on environmental improvements.

Companies eligible for control fall into two categories:

1. The companies which have reactionary inspection (the companies that only have supervision if there are complaints, accidents or similar)
2. The companies that regularly receive inspection.

The responsibility for the inspection is shared between the Environmental Protection Agency under the Ministry and the municipalities. The Agency is carrying out inspections of the potentially most polluting industries, which currently counts 422 companies, some of which may be food or feed companies. The municipality supervises the rest, including livestock farms, which in total counts approximately 48,870 companies and livestock farms that regularly receive environmental inspections.

Like other authorities related to the ministry, campaigns are used for a defined, decisive and coordinated action – typically concerning a specific environmental problem or an environmental theme. The campaigns are divided into industries and agriculture. The Environmental Protection Agency has material from different campaign areas. At the same time, the Agency is working on a pilot study with description of different industries and their environmental impacts. The overall goal of industry descriptions is to facilitate

companies' environmental work and thereby explain to which impacts the company should pay special attention.

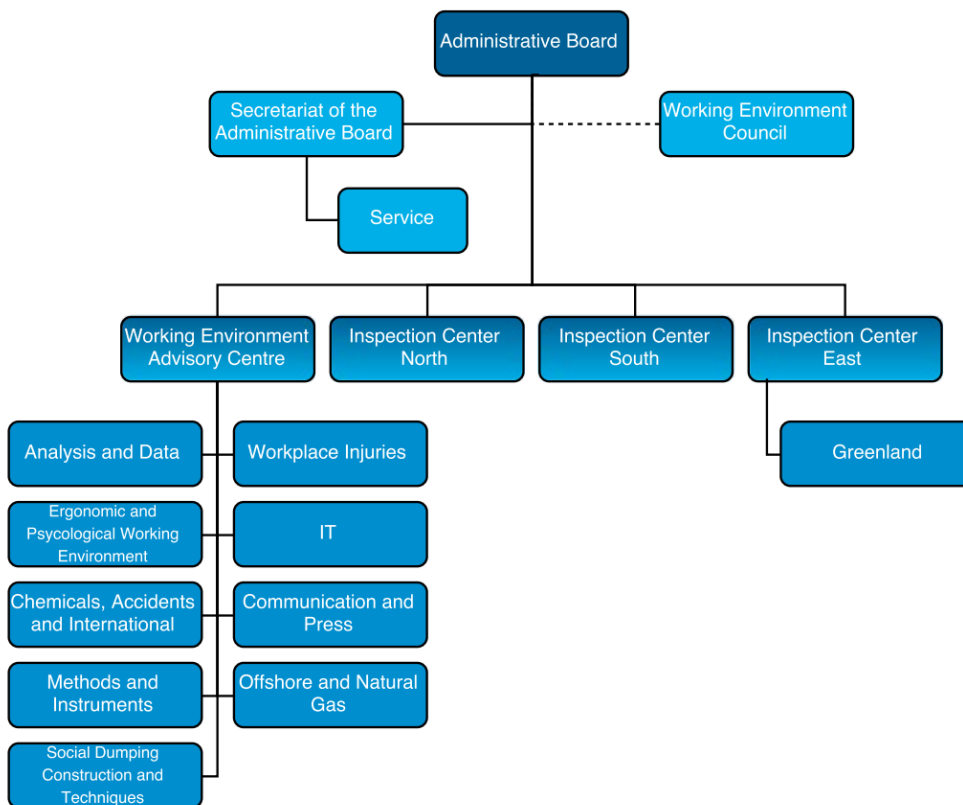
The Agency has the responsibility to prepare the regulations and inspect compliance with the regulations. The order of environmental supervision states the regulations for companies or livestock farms, which receive regularly inspections, while the environmental protection act states the regulatory framework for companies that do not get regular inspections.

The companies and livestock farms, which are covered by the requirement of regular inspections, are selected through a risk-based approach. These companies may fall within one of two risk categories: 1 or 2. Category 1 must have a basic inspection at least once every three years, while category 2 demands a basic inspection at least once every 6 years. In addition, the authority must assess whether the company or livestock farm needs further inspections. This is also based on risk assessment.

There are different sanctions, which can be applied when the regulations are violated, such as a warning, injunction, prohibition, a police action and self-help actions. A warning is used when there is an already established legal position, which must be further observed. Injunctions and prohibitions are used if there is not an established legal status. Some authorities also use recommendations. It can be interpreted as an agreement or guidance on corrective actions. In 2015, there were 282 physical controls covered by the agency.

## **2.8 The Danish Working Environment Authority**

The Danish Working Environment Authority, under the Ministry of Employment, is managed by an administrative board and consists of three inspection centres and a Working Environment Advisory Centre (see Fig. 2.6). The inspection centres inspect companies and supervise specific working environment conditions of all companies operating in Denmark, whereas the Working Environment Advisory Centre develops the strategy, ensures that essential information is passed on and that the regulations are up-to-date. The Working Environment Authority is under the Ministry of Employment and is not part of the national control plan referenced earlier. However, the inspections carried out by the authority are highly relevant for food companies' compliance with regulations regarding labour practices and conditions, which are also among the requirements of the Sustainability Map.



**Figure 2.6.** The Danish Working Environment Authority (DWEA n/d)

The authority conducts both random and targeted inspections. Some targeted inspections are based on risk assessments and are aimed at companies considered to have a higher probability of having problematic issues related to the work environment and companies in especially dangerous industries. The companies are notified of their status and will receive an unannounced inspection shortly after such a warning.

Other inspection methods include (DWEA n/d):

- Retail inspections
- Road transport inspections
- Inspection of foreign enterprises
- Inspection of offshore activities
- Market surveillance

The political strategy for 2020 first states, that the effort on the working environment must be targeted at the companies with the largest problems. Second, it must be ensured that poor working conditions are not going to be a competitive parameter (Ministry of Employment, 2015).

According to the most recent figures, the authority discovers almost twice as many problems in different firms when they apply a risk-based supervision rather than a randomly chosen control. The strategy is formed to reach out for companies in especially dangerous industries. There was an increase from 11 to 21 per cent in companies with problems in 2015 by using the risk-based supervision compared to random sampling control. One of the major points in the new strategy is that the risk-based supervision is carried out on the basis of an index model which includes a number of sector-specific and industry-related parameters such as

previous work-safety issues. There are three regional supervision centres in Denmark, which carry out the control work.

Other targeted inspections are focused on specific issues, either as part of a campaign, as consequence of an accident related to the work or due to suspicions that the inspected company has a problem related to the specific issue. These are all un-notified inspections.

When a company has been given an injunction as the result of a severe breach of the working environment rules, it will be subject to enhanced inspections, including guidance and dialogue with the management and the workers on how to improve conditions. Information on which companies are under enhanced supervision is public on the website of the Working Environment Authority (<https://amid.dk/en>).

The Working Environment Authority cooperates within the framework of Fair Play with the Veterinary and Food Administration, SKAT and other authorities for special control campaigns targeting smaller companies. Fair Play is an extended agency cooperation initiated by the government in 2004. In the project, the authorities work together to fight undeclared work (*moon lighting*) and other illegal activities. The Veterinary and Food Administration participates in the overall coordination, while actual cooperation on the control is exercised regionally. Fair Play is not only looking at the food sector; the medicine industry is included as well. These control campaigns are developed to directly focus on specific problematic issues in a limited area, e.g. campaigns may be directed towards detecting and preventing fraud with food products.

Besides the cooperation with the DVFA, the Working Environment Authority is also cooperating with various other agencies such as the Environmental Protection Agency and the Health Protection Agency, and the Authority is also carrying out a special initiative against social dumping in cooperation with SKAT and the Danish police.

## 2.9 New common control strategy

As described earlier, a new common strategy for compliance control was launched in October 2017 as a collaboration between the four agencies under the Department of the Ministry of Environment and Food: the Veterinary and Food Administration, the Danish AgriFish Agency, The Environmental Agency and the Agency for Water and Nature Management. The strategy is currently in an analysis phase where best practices are being collected and analysed from all four agencies as well as the Danish Working Environment Authority. The latter is included as their control work is carried out in similar manner as that of the Veterinary and Food Administration; mainly using unannounced control visits to companies.

The new strategy has four core areas in focus:

- 1) Ensuring that the controls take place in the right locations, based on a data-driven approach to improve the effectiveness of sampling and selection processes.
- 2) Meeting the costumer, i.e. the companies. Partly based on a consultancy report concerning a survey of companies and farms receiving control visits and inspections, the meeting between control staff and producers and farmers will be in focus, as well as a more dialogue-based approach to inspections.
- 3) The relationship between violations and sanctions, which is based on a notion of impact assessments, knowledge exchange and only sanctioning more serious breaches, while in other cases guidance and dialogue should be used.

- 4) Unified and transparent rules for user payments, so the different agencies do not use very different hourly wages during the fee-funded inspections.

A new feature of the new control strategy is related to ease of control of companies that are certified by third party certification bodies according to standards that overlap with compliance control. If a food or feed company has already been audited by an external auditing body regarding process or performance measures also covered by the public authorities control inspections, the audit reports will to a certain extent replace the public control audit. This new feature of the compliance control is relevant for the use of the Danish web tool based on Sustainability Map, as discussed further in section 5 of this report.

Two new national orders, which concern feed and food control, respectively, and third party certified quality management systems, took effect on the 1st of January 2017 and have since been updated in 2018<sup>3</sup>. The orders describe a risk-based categorisation of food and feed companies in Denmark, which defines the number of annual ordinary inspections depending on the risk level of the company. The need for a national, risk-based assessment is also explicitly mentioned in the new Official Controls Regulation (EU) 2017/625. For both orders, control campaigns will be completed to provide additional control. However, the DVFA can decide to abstain from the control if other tools are more appropriate.

The new orders differ from previous ones in that the DVFA is assessing activities, processes and products before defining in which risk-based cluster the companies should belong. If a feed company or a wholesale/retail company has a certified quality system accredited by an accreditation body and has a standard frequency of one control, it can apply for a reduction in the number of annual ordinary inspections. The application for reduction must include a large amount of information, which is further elaborated in the orders. Similarly, control frequencies can be reduced for feed, food and retail companies organised in chains, i.e. a company with a head office and at least five registered feed, food or retail companies with a common name. The control frequency may be reduced if certain performance measures are met, e.g. if companies in the chain in the last 24 months have had a higher compliance with the rules than the average within the same type of industry group.

The new order on food control also considers the use of the Smiley Scheme, which was introduced in 2001. The Smiley Scheme has made it easier for consumers to see whether the company or store complies with the rules. When a firm is categorised as an elite company, i.e. has an elite smiley, the standard frequency for the number of annual inspections follows another agenda with less control. The first expectation from Denmark's largest dairy company is not to take advantage of the possibility of reduced control if it differs between their dairy plants due to different status in the Smiley Scheme. The reason is that it will be more complex to communicate differentiated public controls to international customers and that the public control is far less costly in terms of time and resources compared to private audits from international standard bodies (Hendriksen 2016, pers. com.).

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<sup>3</sup> Order no. 660 of 31/05/2018 regarding food control and publication of control results; and Order no. 659 of 31/05/2018 regarding feed control and certified quality management systems.

## 2.10 Overlap with Sustainability Map requirements and indicators

The legal compliance control carried out by the different public agencies overlap with the requirements and indicators in the Sustainability Map database to a certain degree, mainly in the categories of Environment and Social requirements. The precise number of requirements that are covered is yet unknown. Table 2.1 shows assessments of the total number of requirements in each category and each sub-category as well as the number of requirements that are covered by the compliance control. The authors' assessments are based on meetings with representatives from the agencies as well as reports and documents on their websites. Excerpts of the database have been cross-checked by the different agencies for a more comprehensive assessment of overlap between the Sustainability Map requirements and the compliance control work. However, the cross-checks could not be officially approved and therefore the final indication of overlap, as shown in Table 2.1 and the appendix, is based on the authors' assessment.

Requirements have been checked while considering their possible inclusion in the compliance control programmes and not their possible inclusion in legislation in general. Some criteria are not relevant in the context of food production in a Danish context, e.g. such as criteria regarding mining practices in the Environment category and criteria related to conflict minerals and to indigenous communities in the Social category. Other criteria are directly phrased as "going beyond legal requirements", which in the context of legal compliance is not relevant. A category of Quality Management System criteria, concerning food, feed and non-food/feed products and services, has been left out. At the ITC, these criteria are not considered part of a sustainability assessment, as they mainly regard technical product qualities. Furthermore, to some extent these criteria are covered by criteria in other categories or are beyond legal compliance.

**Table 4.1.** Four categories and 19 sub-categories of the Sustainability map database, which covers approx. 480 requirements or indicators

| Category   | No of indicators | Covered by compliance control |
|--|------------------|-------------------------------|
| <b>ENVIRONMENT</b>   | <b>249</b>       | <b>102</b>                    |
| Soil   | 14               | 8                             |
| Forests  | 19               | 5                             |
| Chemicals / Natural Organic Inputs                         | 33               | 23                            |
| Biodiversity   | 39               | 17                            |
| Animals – Livestock  | 28               | 17                            |
| Waste  | 27               | 9                             |
| Water  | 15               | 8                             |
| Energy   | 12               | 4                             |
| Climate – Carbon   | 18               | 1                             |
| Other - SSCT Environment                                   | 44               | 10                            |
| <b>SOCIAL</b>  | <b>154</b>       | <b>39</b>                     |
| Human rights and local communities                         | 45               | 5                             |
| Labour practices - Conditions of work & social protection  | 32               | 24                            |
| Labour practices - Employment and employment relationships | 54               | 8                             |
| Labour practices - Human development & social dialogue     | 18               | 1                             |
| Other - SSCT Social  | 5                | 1                             |
| <b>MANAGEMENT</b>  | <b>53</b>        | <b>3</b>                      |
| Economic viability   | 6                | 1                             |
| Sustainability Management Criteria                         | 23               | 2                             |
| Supply chain responsibilities                              | 24               | 0                             |
| <b>ETHICS &amp; INTEGRITY</b>                              | <b>24</b>        | <b>6</b>                      |
| Ethics & Integrity   | 24               | 6                             |

Excerpts of the database are being cross-checked by different public agencies for overlap of issue areas with the control efforts in the compliance control work.

Based on the assessment<sup>4</sup>, totally 150 of the requirements in the Sustainability Map are covered by the compliance control programme (Table 1), corresponding to approximately 31 per cent. It is mainly within the Environment and Social categories, which are also the largest categories in terms of number of criteria (besides the excluded Quality Management Systems category). In the Social category as well as in the Ethics and Integrity categories, the Working Environment Authority covers some of the requirements in their control work, while the Veterinary and Food Administration, the Danish Agricultural Agency, The Danish Fisheries Agency and the Environmental Protection Agency cover the requirements under Environment. An exception is Forests and Water, which mainly is covered by the Agency for Water and Nature Management.

<sup>4</sup> It has not been possible for all relevant public agencies to quality check the assessment.



### 3. The extent of control programmes and results

This section provides an overview of the number of control visits and administrative controls carried out by each of the five agencies, including the former AgriFish Agency, which is now divided into two agencies. The data have been gathered from online sources and through interviews with representatives from the agencies. An internal screening of the 11 largest control schemes was carried out by the Danish Veterinary and Food Administration in collaboration with the other agencies, except the DWEA, in 2016. These data, even though referring back to 2015, are still the most recent available data. With the focus on impact assessment and data-driven approaches in the new common control strategy (Sect. 2.9), it is anticipated that more data on control activities will become available in the future. To the extent the data have been verified by representatives of each agency, it has informed this section as well.

#### 3.1 The Danish Veterinary and Food Administration

The internal screening, mentioned above, regarding inspections carried out in 2015 related to the regulation of feed, food products and veterinary control, shows that of the 2,540 companies related to the feed industry 515 were inspected. Of the 56,900 companies related to the food production industry, 38,500 were inspected. Of the 50,100 companies or live animal stocks that were possibly subject to veterinary control, 6,319 were inspected. Only the area of animal welfare under veterinary control is entitled to self-auditing. Only data from 2015 are available and only in the crude categories made for Table 3.1. The table shows the total number of companies related to the different business areas, the number of companies that were inspected, and the total number of inspections including both administrative and physical controls.

**Table 3.1. Inspection efforts and percentages of different enforcements in 2015**

| <b>Year 2015</b>    | Companies subject to supervision | Administrative and physical controls | Number of physical controls | Pct. with no remarks | Pct. with warning | Pct. with injunctions or prohibitions | Pct. with police reports and fines |
|---------------------|----------------------------------|--------------------------------------|-----------------------------|----------------------|-------------------|---------------------------------------|------------------------------------|
| Feed companies      | 2,540                            | 962                                  | 708                         | 56.5                 | 38.8              | 0.6                                   | 4.1                                |
| Food companies      | 56,900                           | 60,735                               | 60,575                      | 84.9                 | 12.6              | 0.5                                   | 2.0                                |
| Veterinary controls | 50,100                           | 39,498*                              | 7,083                       | 83.0                 | 12.7              | 0.7                                   | 3.7                                |
| <b>Total</b>        | <b>109,540</b>                   | <b>101,195</b>                       | <b>68,366</b>               |                      |                   |                                       |                                    |

Note: \*>30.000 of these were inspections of animals for export.

Source: MFVM Screening

For all types of companies, more than 95 per cent of the companies either received no remarks as the result of the inspections or received a warning, which is the least severe of sanctions and is often followed by guidance as to how future warning may be avoided. Most warnings (38.8 per cent) were given to feed companies.

There must be a healthy balance between sanctions and guidance, and this parameter is therefore open for discussion in the new strategy for the DVFA's control work.

### 3.2 The (former) Danish AgriFish Agency

In 2015, the former Danish AgriFish Agency carried out 60,418 inspections of 9,071 farms, shipping vessels and companies related to compliance control of the area control (applicants of agricultural subsidies), landing control (wild caught fish brought to a Danish harbour), and organic production control. Of the 40,800 farmer applicants subject to the area control, 2,435 were inspected physically, while all underwent administrative control. A total of 817 fishing vessels, mainly Danish but also foreign, were inspected 2,626 times upon landing in 2015. According to EU regulations, all organic farms and organic agricultural supply companies must be inspected at least once a year (RFO 834/2007). This control is announced at least 14 days in advance. In addition to these announced visits, 10 per cent additional unannounced controls are performed on a random sample (NAER 2016). All 2,508 organic farms and 121 organic suppliers (as of 2015) received a control visit in 2015, while 209 and 7, respectively, received an additional random sample control visit, not quite making the 10 per cent aim of unannounced controls. Table 3.2 gives an overview of the number of farms and fishing vessels that were possibly subject to control and the number of physical and administrative controls carried out.

**Table 3.2.** *The AgriFish Agency's inspection efforts in three control domains in 2015*

| <b>Year 2015</b>   | Farms/vessels subject to inspection | Farms / vessels inspected | Administrative controls | Total controls |
|--------------------|-------------------------------------|---------------------------|-------------------------|----------------|
| Area control       | 40,800                              | 3,600                     | 40,800                  | 44,400*        |
| Landing control    | 2,781                               | 2,626                     | 10,513                  | 13,139**       |
| Organic production | 2,629                               | 2,845                     | 97                      | 2,942          |
| <b>Total</b>       | <b>46,210</b>                       | <b>9,071</b>              |                         | <b>60,481</b>  |

Notes: \* 40,800 administrative controls. \*\* 10,513 administrative, automated controls

Source: MFVM Screening

Every year there must be a certain number of 'double staffed' controls where two inspectors carry out the physical inspection with the purpose of a streamlined control. It helps increasing the quality of the public control. Table 3.3 provides an overview of the warnings and sanctions given as the result of the control in the three control areas during 2015. The majority of farms, companies and fishing vessels received no remarks. Thus, those were in full compliance with regulations, while the physical control of farms receiving agricultural subsidies result in most sanctions. The sanction used in this case is a reduction in the support and in some cases a reduction and a further sanction.

**Table 3.3. Percentage of warning and different sanctions in 2015**

| <b>Year 2015</b>   | Number of controls | Pct. no remarks | Pct. a warning | Pct. injunctions or prohibitions | Pct. Police report and fine | Pct. with reduction in EU support | Pct. with reduction in support + sanction |
|--------------------|--------------------|-----------------|----------------|----------------------------------|-----------------------------|-----------------------------------|---|
| Area Control       | Physical 3,600     | 56.3*           |                |                                  |                             | 28.3*                             | 15.4*                                     |
|                    | Adm. 40,800        | 94.8            |                |                                  |                             | 4.4                               | 0.8                                       |
| Landing control    | Physical 2,626     | 94.8            |                |                                  | 2.5**                       |                                   |   |
|                    | Adm. 10,513        | 98.4            |                |                                  | 1.6                         |                                   |   |
| Organic production | Physical 2,845     | 88.9            | 7.3            | 2.1                              | 1.7                         |                                   |   |

Notes: \* Preliminary statistics, since not all cases are compiled yet. \*\* The number may also contain milder sanctions. There are no statistics on the distribution of sanctions - will require a manual review of all infringement cases.

Source: MFVM Screening

### 3.3 Agency for Water and Nature Management

The agency made 189 physical control visits to 165 forest owners of a total of 1,500 forest owners. An additional 1,720 administrative controls were carried out, as well as 296 physical inspections in relation to a disbursement request from a forest owner. Of the approximately 650 waste-water treatment plant, 75 were inspected physically while all underwent administrative control. There are no data related to warnings or sanctions. Table 3.4 provides a quick overview.

**Table 3.4. Inspection effort in 2015**

| <b>Year 2015</b>   | Owners & plants subject to control | Physical inspections | Administrative controls |
|--------------------|------------------------------------|----------------------|-------------------------|
| Forests            | 1,500                              | 189 + 296            | 1,720                   |
| Waste Water Plants | 650                                | 75                   | 650                     |
| <b>Total</b>       | <b>21,150</b>                      | <b>284</b>           | <b>2,945</b>            |

Source: MFVM Screening

Data on the number of different sanctions applied are not available. The possible sanctions used are instructions, recommendations, warnings, injunctions police reporting, self-help-act, escalation and reduction in EU support.

### 3.4 Environmental Protection Agency

The screening by the Ministry of Environment and Food of Denmark on the controls in 2015 related to the environmental regulations shows that of the 48,870 companies subject to municipal control, totally 15,205 were inspected. Of the 422 companies subject to state control, 192 were inspected. Altogether, 48,906 inspections were carried out by municipal authorities and 192 by state authorities.

Table 3.5 shows the different sanctions in 2015 for the area of environmental regulations related to the MFVM screening.

**Table 3.5. Percentage of warning and different sanctions in 2015**

| <b>Year 2015</b>          | Number of controls                 | Pct. no remarks | Pct. of Recommendation | Pct. a warning | Pct. injunctions or prohibitions |
|---------------------------|------------------------------------|-----------------|------------------------|----------------|----------------------------------|
| Environmental regulations | 282 (EPA)*<br>n/a (municipalities) | 72.0<br>n/a     | 1.0<br>n/a             | 23.0<br>n/a    | 4.0<br>n/a                       |

Note: \* since sanctions cannot be unambiguously determined as linked to the control efforts, the numbers are estimated.

Source: MFVM Screening

The data on municipal and state control effort are not categorised by sector and production, but by the definitions of which company types are subject to what level of supervision. This means that the control efforts in the food-and-agricultural sector (including production of food and non-foods such as fur, wood etc.) are not directly available, as these are represented in categories also containing data for non-food-or-agriculture related industries. Detailed descriptions of the specific categories of companies subject to supervision are listed in Table 3.7.

In spite of this uncertainty, it is possible to give a rough representation of the control effort in the food-and-agricultural sector (see Table 3.6). The uncertain categories constitute only less than half of the total controls in the relevant categories. Assuming that a significant portion of these uncertain categories is constituted by relevant companies, the control effort in the food-and-agricultural sector represents by far the largest portion of the total controls. In 2015, in these categories 41,223 companies were subject to municipal supervision, 12,831 companies were inspected and the total amount of municipal inspections carried out towards companies in these categories was 14,904.

The inspection effort exceeds the targeted amount of inspections by far. In 2014 and 2015, twice the targeted amount of inspections was carried out. From the 1st of May 2016, data from the municipal inspections are reported on company scale via a digital environmental administration platform, called DMA, making way for more exact analysis of the inspections in the food-and-agricultural sector. In 2015, the municipal inspection effort led to 2,963 recommendations, 4,994 warnings, 50 prohibitions, 208 injunctions, 1 self-help act and 61 police reports being filed. These numbers are not included in table 6 because the data are coming from two different sources.

Table 3.7 describes the types of food-and-agricultural related companies as well as non-food-and-agricultural related companies that are included in each category of data for the municipal inspection, cf. Table 3.6. Categories subject to the Industrial Emissions Directive are marked IED.

**Table 3.6.** Yearly inspection effort of the food-and-agricultural sector by municipal authorities

| Year                         | 2015                             |                     |              | 2014                             |                     |              | 2013                             |                     |             |
|------------------------------|----------------------------------|---------------------|--------------|----------------------------------|---------------------|--------------|----------------------------------|---------------------|-------------|
|                              | Companies subject to supervision | Companies inspected | Inspections  | Companies subject to supervision | Companies inspected | Inspections  | Companies subject to supervision | Companies inspected | Inspections |
| Company type 1               | 257                              | 133                 | 163          | 261                              | 146                 | 170          | 265                              | 127                 | 136         |
| Company type 2               | 5251                             | 2268                | 2733         | 5277                             | 2383                | 2793         | 5179                             | 1712                | 1771        |
| Company type 3               | 10150                            | 2602                | 2965         | 10427                            | 2787                | 3187         | 10293                            | 2153                | 2184        |
| Livestock, large, IED        | 1665                             | 918                 | 1005         | 1666                             | 795                 | 936          | 1610                             | 715                 | 748         |
| Livestock, large, other      | 390                              | 151                 | 178          | 378                              | 170                 | 189          | 280                              | 72                  | 76          |
| Livestock, large             | 1582                             | 752                 | 1022         | 1357                             | 700                 | 832          | 1428                             | 420                 | 429         |
| Livestock, medium            | 1926                             | 828                 | 931          | 1872                             | 768                 | 851          | 1755                             | 541                 | 546         |
| Livestock, small             | 2035                             | 523                 | 550          | 1765                             | 453                 | 532          | 1772                             | 286                 | 266         |
| Livestock, tiny              | 14831                            | 3870                | 4425         | 15781                            | 4098                | 4564         | 15708                            | 2893                | 2828        |
| Fur production, small        | 336                              | 105                 | 124          | 465                              | 152                 | 175          | 471                              | 94                  | 96          |
| Fur production, large        | 1008                             | 347                 | 424          | 870                              | 336                 | 442          | 999                              | 317                 | 325         |
| Fresh water fish farms       | 185                              | 181                 | 191          | 196                              | 169                 | 149          | 0                                | 0                   | 0           |
| Land use                     | 1607                             | 153                 | 193          | 0                                | 0                   | 0            | 0                                | 0                   | 0           |
| Target amount of inspections | 7325                             |                     |              | 7701                             |                     |              | 5618                             |                     |             |
| <b>Total</b>                 | <b>41223</b>                     | <b>12831</b>        | <b>14904</b> | <b>40315</b>                     | <b>12957</b>        | <b>14820</b> | <b>39760</b>                     | <b>9330</b>         | <b>9405</b> |

Note: The three company categories included supervisions of companies in non-food-and-agricultural sectors. IED marks categories of companies, which are subject to the EU Directive on Industrial Emissions.

**Company type 1:** companies include slaughterhouses, mills, bread-, sugar-, protein-, yeast- and potato flour-factories, breweries. **Company type 2:** companies include saltwater fish farms, fish farms at sea, FREA-fish farms (enclosed recirculation of water). **Company type 3:** companies include smaller slaughterhouses, mills, bread-, sugar-, protein-, yeast- and potato flour-factories, breweries.

Source: Data from the Danish Environmental Protection Agency

**Table 3.7.** Types of companies included in the different categories receiving inspections by the Danish Environmental Protection Agency

|  |  |  |
|--|--|--|
| <b>Company type 1:</b><br>- Slaughterhouses, treatment of meat for food and fodder, mills, bread-, sugar-, protein-, yeast- and potato flour-factories, breweries and larger livestock holds.<br>- Production and processing of metals and minerals. Chemical industrial production of fertilizer, pesticides and pharmaceutical products. Waste managing companies, incl. combustion. | <b>Company type 2:</b><br>- Fish farms; saltwater, fish farms at sea, FREA-fish farms (enclosed recirculation of water).<br>- Surface treatment of metals, steel industries, chalk and coal production, sawmills, robber factories, airstrips and shooting-ranges, crematories.            | <b>Company type 3:</b><br>- Margarine factories, smaller slaughter houses and dairies, smaller bread-, sugar-, protein-, yeast- and potato flour-factories and smaller breweries. Handling of manure.<br>- Processing of iron, steel, metals, raw materials, gas, asphalt and chemical processing of plastic, soap-production. |
| <b>Livestock, large (IED):</b><br>- More than 250 DE, or:<br>- More than 270 DE, if 90% are sows with pigs until 30 kg or facility for 750 sows.<br>- 210 DE, if it is pigs (over 30 kg) or facility for 2000 pigs.<br>- 100 DE, if it is chicken, 230 DE if it is egg-laying hen or facilities for 40 000 poultry.  | <b>Livestock, large, other:</b><br>- Livestock holds not included in livestock, large, (IED) and not subject to IED.<br><b>Livestock, large:</b><br>- As for livestock, large, (IED), only not subject to IED.<br><b>Livestock, medium:</b><br>- +75 DE but smaller than livestock, large. | <b>Livestock, small:</b><br>- Between 15 and 75 DE.<br><b>Livestock, tiny:</b><br>- Between 3 and 15 DE.<br><b>Fur production, large:</b><br>- Between 25 and 250 DE.<br><b>Fur production, small:</b><br>- Less than 25 DE.   |

### 3.5 The Danish Working Environment Authority

The Danish working Environment Authority publish their inspection data on their website. In 2016 there were 24,899 so-called reactions (described below) within the Working Environment Act (including guidance). Table 3.8 provides the number of companies and farms inspected in the industry categories Agriculture, Forestry and Fishery, Slaughterhouses, and Food and Stimulants. Other industries may also contain companies that are included in the food sector. Table 3.8 also contains the number of occurrences, i.e. sanctions, injunctions etc. as the result of the control visits. The total number of occurrences seems high for all three industries, but the far majority is improvement notices, immediate improvement notices or guidelines.

To summarise the occurrences; a non-binding guideline is issued if the authority observes conditions that can be improved but which do not require a ruling. A ruling without an obligation to act is passed when the company has violated the Working Environment Act, but avoids the obligation to act; e.g. the relevant corrections have been initiated or the violation did not lead to an immediate improvement notice or a prohibition notice and the problem will therefore be solved before the inspection procedure is completed. A §21-notice is a notice that requires the company to investigate the health and safety conditions at the work place, in case the conditions do not comply with the Working Environment Act. A company can receive several kinds of improvement notices:

- A notice with a time limit, meaning that the production can continue, but a correction must be made within a certain date
- A consultancy notice regarding the use of an authorised health and safety consultant to assist in correcting and preventing further violations, and
- An immediate improvement notice, meaning that the violation has to stop immediately.

**Table 3.8.** *Inspection efforts and occurrences in 2015 in selected industries by the Danish Working Environment Authority*

|                              | Number of companies inspected | §21-Notice | Ruling without obligation to act | Prohibition notice | Improvement notice | Immediate notice | Guideline  | Totals       |
|------------------------------|-------------------------------|------------|----------------------------------|--------------------|--------------------|------------------|------------|--------------|
| <b>Year 2015</b>             |                               |            |                                  |                    |                    |                  |            |              |
| 18 Agri., forestry & fishery | 1,980                         | 1          | 18                               | 20                 | 446                | 585              | 242        | 1,312        |
| 19 Slaughterhouses           | 92                            | 2          | 11                               |                    | 43                 | 55               | 12         | 123          |
| 20 Food and stimulants       | 666                           | 2          | 14                               | 1                  | 122                | 147              | 85         | 371          |
| <b>Industries total</b>      | <b>2,738</b>                  | <b>5</b>   | <b>43</b>                        | <b>21</b>          | <b>611</b>         | <b>787</b>       | <b>339</b> | <b>1,806</b> |

Source: Data from the Danish Environmental Protection Agency.

The Working Environment Authority has become more focused (Stokholm 2016). Based on more systematic audits, the chance of receiving a warning has increased for the companies, which already have been reported to have problems in the work environment.

### 3.6 Sante F - the European Commission's Health and Food Audits and Analysis

It is up to national, regional and local governments to apply and enforce EU laws on food and product safety, consumer rights or public health. The EU-Directorate General for Health and Food Safety (DG SANTE) ensures and supports this application and enforcement. Sante F (officially: Health and Food Audits and Analysis) is the auditing unit of DG SANTE.

In the most recent general audit report of the Danish food control system EC (2017):

*"Internal audits in Denmark provide assurances to (a) the hierarchy on management of risks, (b) stakeholders on the quality of controls and (c) European Commission on the operation of internal audits. Auditing arrangements in place provide credible and reliable results. The audit process is systematic, professional and goes beyond simply verifying compliance with planned arrangements. Verification of effective implementation and suitability in achieving objectives are clearly part of the audit objectives and process. Competent authorities take adequate actions in the light of audit results – leading to continuous improvements. The audit process is under regular review and independent scrutiny provides assurances that the audit system complies with planned arrangements."*

The overall conclusion is that the control framework does work. The purpose of the Sante F audits is to see whether relevant agencies within the sector in Denmark are following the EU legislation. At the same time, it aims to secure consistency in this sector across EU. When Sante F conducts audits in Denmark it audits the DVFA control of livestock farms, companies and laboratories. Normally, Sante F will observe how the agency conducts and performs inspections, and subsequently write an audit report of the findings and of "fact-finding missions". Fact-finding missions are similar to the Sante F audits. However, their task has a more investigative point of view. Questions, about how the control is carried out in Denmark and if there is any problem with the EU legislation, are answered in this report. At the same time, good practice examples are given.

According to Sante F, the competent authorities shall carry out official controls in accordance with documented procedures. One main conclusion from Sante F is that audits, inspection campaigns and "model control cases" also contribute to the verification of the effectiveness of controls, and play an important role in the objective of continuous improvement. There is an overall basis for regular review of the effectiveness of controls. Denmark is commended for the strategy plans related to the annual performance contract with the Ministry of Environment and Food. The audit report gives one general recommendation regarding better achieving the objectives of the internal audit systems, and a few challenges are raised; improved coordination between DVFA and (the former) DAFA; better transparency and dissemination of best practices in (former) DAFA, and reporting on audit outcomes. The challenges are being addressed in the new setup of the Danish Agricultural Agency and the common control strategy.

### 3.7 A common strategy for data compilation

The recent effort by the Ministry of Environment and Food to collect data concerning control compliance by the different agencies under the ministry has been one of the first compilations of data for a grand overview of the control work. It has shown, however, the difficulties of obtaining comparable data on scope and results from a number of different institutions that use different approaches to data registration and storage. The new common food control strategy (MFVM, 2017) provides a good opportunity to streamline the registration

of data regarding number of control objects (companies, farmers etc.), number of inspections and number of different sanctions or recorded occurrences, as well as improvements in performance after a sanction or milder recommendation. The publication of these data to the public, at least once per year, in order to ensure a high level of transparency, is a requirement to all EU members according to the Official Controls Regulation (EU 2017/625 Article 11). The common strategy does not detail how this can be done, but describes the approach in general terms under three of the ten principal efforts put forward in the common control strategy:

Effort 1: Systematic approach to risk-based, data-driven selection, which aims to strengthen the data-driven control efforts among all relevant public authorities, thereby also improving the transparency of the selection of companies for control to the public.

Effort 3: Better use and analysis of data, which aims to improve automated data collection, data quality, data analysis and data sharing across ministries and with the private sector, supported by new technologies such as artificial intelligence and big data.

Effort 7: Impact assessments, which aim to develop new methods for measuring impact of the control programmes, related to improved data quality and availability.

These efforts, along with the remaining seven principal efforts in the common control strategy, are forming the basis for the development of control programmes within and across the public offices working with food and feed control. These efforts should also include the development of a common database or compatible institution-specific databases in order to facilitate continuous data availability for impact analyses, risk analysis within and across sectors and improvements of control efforts. As discussed in section 5 in this report, new tools and databases, such as Sustainability Map, developed for food and feed producers' and companies' audit and supply chain management could work together with the public control database in order to reduce the costs of public controls and assist Danish producers and companies meet the auditing and sustainability requirements of buyers.



## 4. The benefits of the control and enforcement programmes to the Danish food sector

Based on interviews with Danish export-oriented food companies as well as representatives from the Danish Agricultural and Food council, the Confederation of Danish Industry and the agencies under the Ministry, a number of benefits of the compliance control and enforcement programmes have been identified. The benefits are both for the food sector widely and for export oriented marketing.

In section 4.1, a general description of the benefits related to the control and enforcement programmes will be elaborated. In section 4.2, interviews with different companies and authorities have given a clarification of the benefits from their perspective. Many of the companies have formulated the same answers, which indicates a common understanding and positive awareness of the control programmes.

### 4.1 General application of the control and enforcement programmes

Companies face the same challenges when entering new markets: linguistic and cultural differences, logistics, commercial issues such as demand and securing payment, rules, tariffs and quotas. It can be difficult to navigate in all the requirements when establishing export. Often the hardest challenge is overcoming non-tariff barriers, such as standards, which are not always based on clear legislation. Generally, the more lucrative the market, the harder it is to gain access, but once the right connections are established, further trade can easier be achieved. It is important for each company to evaluate the costs and potential advances of gaining access before deciding to invest the necessary resources. China is one of the cases where high reward follows a hard gained access, whereas India often is deemed to be too costly a market to enter. Being too dependent on one market may be risky, as the barriers may suddenly change. It is thus necessary to search for new markets, even when exports are high (Laustsen 2016, pers. com.).

On both national and sector level, joint ventures are carried out to enhance exports for the food sector, as well as for Danish products in general. One example of this is joint trade delegations with representatives from both agencies, the Danish Agriculture and Food Council, the Confederation of Danish Industry and from relevant companies. The overall frame is often the story of Denmark as a green and clean agricultural landscape with a stable and safe food production. A food production that is well coordinated and organised, with a high level of transparency and traceability throughout the entire production chain, and that takes place in a trustworthy country with a functioning system and no corruption. “Danish” is actively used as a brand and the control is the basis for the credibility of this story (Zøfting-Larsen 2017, pers. com.).

Even if the above is the broadly adopted perception amongst customers around the world, control and enforcement is nonetheless a key issue. Public and private/internal audits and documentation are critical to meet customer requirements and to meet local criteria and standards. Public control is especially important when it comes to veterinary safety. Sometimes the national audit is audited before gaining market access and later to keep market access. Public and private sectors work together in meeting such national demands. An example is the completion of extensive questionnaires and forms in order to gain access to the Japanese market, which required the collaboration between public agencies and private food companies (Laustsen 2016, pers. com.).

Up and coming trends for control and documentation include increasing interest in animal welfare, social sustainability and environmental issues, especially amongst companies which supply directly to the retailers. Furthermore, digitalisation of the documentation and certification is in focus, but countries use different systems and not all third world countries are ready for this.

Food safety is the basis of any food export. In the case of export of animal and meat products, which make up a large share of the Danish agriculture and food export, the “Danish model” for veterinary control and preparedness that is built on collaboration between public authorities and the meat industries is an important pillar. In a report by Christensen et al. (2017), it is concluded that while improving the Danish veterinary preparedness system would not facilitate access to new markets, a better visibility, documentation and marketing of systems would be valuable for gaining new market access and for regaining access to existing markets after disease outbreaks.

Larger customers tend to favour large suppliers to maintain an adequate supply level. This constitutes a challenge for smaller companies. For these companies, the Danish reputation as a place that generates a stable supply of high quality products can be a great asset. The joint effort to promote the story of Danish food seems to be bringing firms, sector organisations and authorities together in common strategy to enhance Danish food exports. After the Russian boycott, the interest in these joint promotions has increased, especially towards new markets in South-east Asia, South America, the Middle East and Africa (Zøfting-Larsen 2017, pers. com.).

## **4.2 The different values related to control and enforcement programmes**

This section is based mainly on answers from food production companies and their assessment of the benefits.

### ***Guidance to companies for performance improvement (general)***

The control efforts are well received in most companies. Most of the companies make an effort to ensure and if necessary improve on the control parameters. A great part of the audit is guidance and therefore at a relatively low cost to the company (NAER 2016). According to J.W. Jensen (2016, pers. com.) the audit also takes the act of a sparring partner in relation to concrete and current issues where they contribute with their knowledge and experience. Therefore, the inspection is also seen as being essential for the export, and the audits provide an affirmation for the company in relation to compliance with the legislation (Hendriksen 2016, pers. com.). As the inspections are carried out both announced and unannounced, a large company like Arla Foods is always ready for inspections and audits; if not, the company could simply not operate (ibid.). According to B. Nielsen (2017), the audit makes a basis for a good sparring partner for exchange of experiences. It creates a greater awareness among the different industries and improvements can be discussed in an open atmosphere. However, it is well-known among the companies that the requirements in Denmark are more rigorous than in other EU countries (Tinggaard 2017, pers. com.).

Supposedly, everything is documented in the Danish control scheme, which according to Tinggaard (2017, pers. com.) indicates that Denmark has a food industry and control programmes that are well-functioning. However, as described in this report and as experienced in the MFVM screening, the documentation is not always easy to come about.

### ***Trust in control programmes and credibility of the food sector***

The credibility of the food sector is partly based on the public authority's capability to make reliable controls, and consumers' trust in food safety is related to their perception of how well the national food control programmes work. This was the finding in a study by Berg et al. (2006) of consumers in Denmark, Norway and Russia, but may also be accurate for costumers in export markets and their perception of the Danish food control and food sector in general. In this respect, it is important to have the history of the development of the control system in mind, as represented by the story of Danablu (see section 2). In Denmark, there is a long history of collaboration between the authorities and the wider food industry, a part of what is often called "the Danish model". Here, the industry's need for regulatory frameworks, counselling, and support has met the authorities' objective to create a food sector that i) develops products which are safe to consumers, ii) are internationally competitive, iii) takes broader societal values into consideration and, in the last four decades, iv) has met the obligations from the EU regulatory framework.

The credibility of the Danish food sector is also based on the traditions for high quality production by the Danish agriculture and food sector, which again is a result of legislation, control efforts, good education of staff, good advisory services, funds for innovation etc. Positive perceptions abroad are important and often related to the traditionally strong role of cooperatives in Denmark (Laustsen 2016, pers. com.). Danish companies are often open for a discussion regarding the audit reports with representatives from the international market. This open-minded attitude strengthens the credibility of the Danish food sector. Besides the high quality, Danish food companies are well-known for precise delivery of products, which is part of maintaining a high credibility. Furthermore, Petersen (2017, pers. com.) mentions that the general high trust in Danish companies is based on a high morale among the companies.

In general, most customers expect that the products meet the requirements related to the public control. It is important not to overestimate the Danish control – other countries within the EU have the same high standards as Denmark (Petersen 2017, pers. com.).

### ***Branding***

A brand can be difficult to describe as it includes many different factors. The brand "Danish" is not commonly used as a main factor for entering a new market; however, the majority of the interviewed representatives of food companies believed the Danish brand to play some role in their export efforts. The story about the Danish control programmes with regards specifically to food safety is often used as a branding tool, because it increases an open-minded communication (Tinggaard 2017, pers. com.). The Danish organic "Ø"-label is also part of the Danish brand and has a positive effect on the marketing (S. Jensen 2016, pers. com.). In a report by Hansen et al. (2017), the value of the Danish brand, in general and for specific labelled products (specifically, cheese and butter), was important in explaining premium-priced Danish products on export markets.

### ***Quality and up-market products***

The Danish agricultural sector can deliver a variety of products with different standards and qualities. An important quality aspect of this is that the agricultural sector can produce very specific products, e.g. in terms of size, quality, fat percentage in meat, etc., as well as deliver large quantities, which are demanded on the export markets and very important for the buyers (Laustsen 2016, pers. com.). In the sector of dairy products, the elite smiley is cherished and there is an internal competition between dairies to keep the highest quality mark (Hendriksen 2016, pers. com.). The audit reports are often shown to potential new customers. The

Danish control and guidance is an authority tool, which is weighted highly among the customers – often in line with or higher than 3-party certificates (J.W. Jensen 2016, pers. com.). According to Bonde (2017 pers. com.), it takes a lot of resources to complete the audits, but the large amount of control will ensure a higher price because of the increased quality. Hansen et al. (2017) also link the premium-price of Danish food products on export markets to the public control programme, especially in the case of pork meat, where a well-functioning control programme and veterinary preparedness are essential.

### ***Traceability and food safety***

Traceability is often said to be one of the most important reasons for the export success in the Danish agricultural sector. Especially when exporting to non-EU countries, traceability is a key factor. Even though the audit is time-consuming, it can be turned into an advantage and increased traceability is one of the outcomes and a great benefit (Bonde 2017, pers. com.). The subject of self-monitoring creates traceability and generally, there is a high degree of traceability in Danish food value chains as well as transparency in the sector (Laustsen 2016, pers. com.). At the same time, Denmark is known for not being influenced by bribery, and overall there is a high compliance with laws and regulations (ibid.), which is also part of the question of traceability.

Pouliot and Sumner (2008) state that in the case of highly contagious diseases or when multiple related dangers are suspected, traceability is important to reduce risk of further damage. Traceability is thus part of the veterinary preparedness and it is found to be one of the strengths of the Danish preparedness (Christensen et al. 2017). According to Hendriksen (2016, pers. com.), one of the reasons for premium prices on export markets is food safety, which is highly related to the control work. Though food safety may not always lead to higher prices, it will initiate a dialogue, which can lead to a sale (S. Jensen 2016, pers. com.). Food safety is a must for products intended for export and it is considered to be a part of the complete package (Tinggaard 2017, pers. com.), and e.g. in China, the public control and food safety are consciously used in the communication for building relationships between countries (Zøfting-Larsen 2017, pers. com.). Especially, in the joint business promotion together with DVFA, the control objective is highlighted.

### ***Resource efficiency***

In general, the Danish agricultural sector is good at producing “more for less”. Depending on interest on the export market, a specific focus can be set on a single element e.g. an event in China has been planned regarding water conserving agricultural production. This is relevant in some areas in the Chinese agricultural production, where water is in focus as a scarce resource (Laustsen 2016, pers. com.). As such, the resource efficient Danish food sector, partly a result of stringent requirements and an associated control programme, can be show-cased in events on export markets and thus help to increase awareness of the Danish agricultural and food sector.

### ***Veterinary preparedness***

Christensen et al. (2017) assessed the benefits of the Danish veterinary preparedness related to the export of animal products. Denmark has a large export of animal products and the ability to maintain and expand this export is based on the condition that the Danish agriculture can be free of a number of serious infectious diseases such as foot and mouth disease and swine fever. The value of the preparedness is particularly clear in the preliminary negotiations when a market is reopening after a veterinary crisis.

In Denmark, the veterinary preparedness is commonly known by the exporters, especially the preparedness related to food safety and healthy animals, which are important factors for export market access. It is reasonable to assume that the more effective and comprehensive the preparedness is, the better it is perceived (Christensen et al. 2017), and simultaneously, it will increase food safety. Concepts like professionalism, trust, transparency and cooperation are automatically emphasised in the veterinary preparedness, but also need to be actively promoted in marketing efforts for the full value of a working veterinary preparedness to be realised (Christensen et al. 2017).

When looking at the market of food products, animal by-products, animal feeds, live animals and breeding material to a third world country, it is the exporters' responsibility to comply with the conditions required by the authorities in the recipient country. The conditions will often be indicated in a certificate. The notion that Denmark has a well-functioning veterinary contingency seems to be a necessity for countries to consider Danish meat products. There are clear guidelines if another outbreak of foot and mouth disease should happen in Denmark, and these guidelines are recommended by the World Organization for Animal Health ([http://www.oie.int/eng/A\\_FMD2012/docs/en\\_chapitre\\_1.8.5.pdf](http://www.oie.int/eng/A_FMD2012/docs/en_chapitre_1.8.5.pdf)).

The research indicates that food safety and veterinary safety go hand in hand and must be a part of the branding when entering new markets. At the same time, traceability and transparency are used as factors for re-entering a market. Based on these factors and governmental involvement, good connections and relations with exporting countries are developed. Different parties are marketing Danish exports of livestock products – and thus there are several parties marketing the veterinary preparedness. However, even though the veterinary preparedness is a necessary condition, it is not necessarily the determining factor for whether market access is achieved.

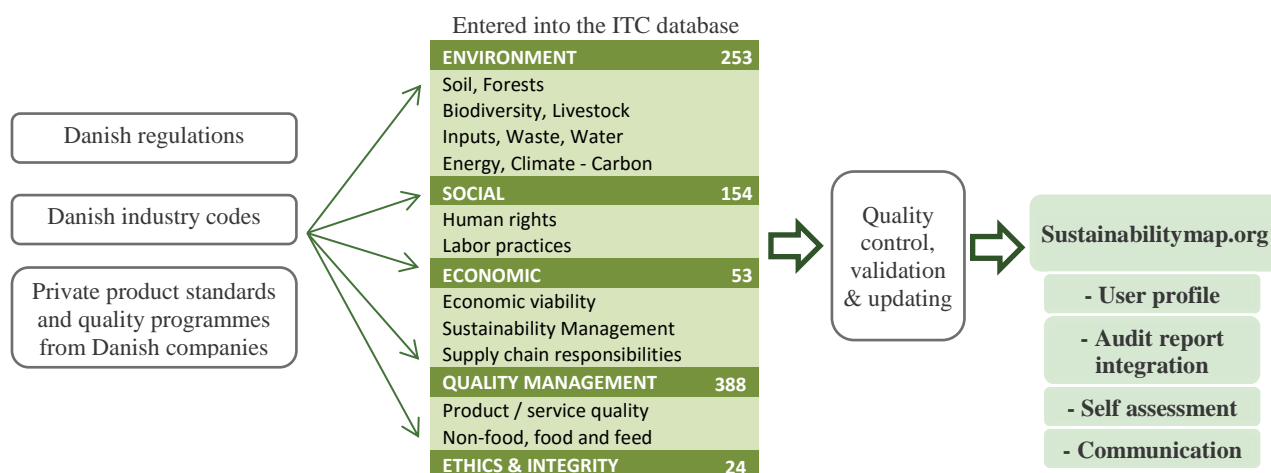
### ***Sustainability***

The more recent concept, sustainability, has received increased awareness in the broader public on export markets, and over the past years it has gained increasing importance in the food industry in general (Akkerman et al. 2010). Though most companies have or are developing sustainability profiles and strategies, it is especially the large companies, responsible for large parts of the value chain and which supply products directly to retailers, such as Carlsberg, Arla and to a lesser extent Danish Crown, which are interested in sustainability (Laustsen 2016, pers. com.). Arla Foods is promoting specific stories related to sustainability, such as packaging with a lower consumption of materials, and it explains how waste water is recycled, how its consumption of soy (feed to cattle) is certified, and it is developing energy initiatives (Hendriksen 2016, pers. com.).

As sustainability is a broad concept and potentially includes many different aspects from primary production to consumption and waste management (Bosselmann 2012), there are various elements in the Danish control and audit programme that incentivise Danish companies and producers to work with sustainability issues, such as resource efficiency, workers conditions, food safety measures and animal welfare. According to Zøfting-Larsen (2017), animal welfare is not yet used in the general marketing strategy, but it is an area that will be highlighted in the future as the consumers also on export markets gain awareness. Another aspect of producing sustainably is the low use of pesticides in both the primary and secondary production, which is also part of the Danish reputation (Bonde 2017, pers. com.). Even though, the allowable levels of pesticide residues in food products are set by the EU (DFVA n/d), it adds a great value if the agricultural productions are able to have a lower use than the acceptable EU level.

## 5. Integrating compliance audit report to Sustainability Map profiles

International Trade Centre (ITC), a joint agency of the World Trade Organization and the World Bank with a mission to foster inclusive and sustainable growth through trade, have so far compiled information on more than 240 sustainability standards in a global database, The Trade for Sustainable Development (T4SD) standards database. The database, accessible through an online platform [www.sustainabilitymap.org](http://www.sustainabilitymap.org), consists of more than 500 requirements and indicators within five broad categories; environment, social, economics, quality management systems, and ethics and integrity (Fig. 5.1). Producers, manufacturers, retailers and others can create a user profile and among other features carry out self-assessments against selected standard requirements, e.g. from a potential buyer, and generate personalised sustainability diagnostics which may be shared with business partners and customers.



**Figure 5.1.** Danish regulations, industry codes (as a proxy for regulations), product standards and quality programmes have been added to ITC's standards database

In project 1 and 2, described in the preface to this report, Danish legislation, industry codes and private product standards and quality programmes from Danish food companies were added to the database (Figure 5.1). Subsequently, a web tool, integrated in the Sustainabilitymap.org, was developed for Danish food companies and launched in November 2017. Three Danish companies, Arla Foods, Danish Crown and Copenhagen Fur, are currently using the Danish web tool. Danish food producers and manufacturers are able to use the Danish web tool to self-assess against private standards taking into consideration the Danish regulations' coverage of standard requirements. In practice, farmers, producers and manufacturers in the Danish food sector create their Sustainability Map profile and select the preloaded standards, which they already comply with, including relevant Danish regulation, and then go through a self-assessment toward a certain sustainability standard of their wish, e.g. corresponding to a demand from a potential buyer. A self-assessment questionnaire will be prepopulated based on legislation compliance, i.e. requirements of the sustainability standard that are already covered by legislation will not appear in the questionnaire. Producers may also opt to go through a full self-assessment (not prepopulated). Producers'

self-assessments will be included in their respective profiles where they can upload additional information about themselves, e.g. name, size of the production, geolocation, and any certificates or audit reports. Profiles can then be shared with potential buyers who can review producers' compliance with private standards as well as Danish legislation. Furthermore, producers may upload standard compliance certificates as well as audit reports from inspections made by certification bodies and public authorities inspecting legal compliance (see Fig. 5.2). The profile may thus become an important element in the sustainability reporting and communication with existing or new customers.

The screenshot displays the 'Compliance' step (step 2) of the Danish Sustainability Map web tool. The interface includes a progress bar at the top with six steps: 1. Profile, 2. Compliance, 3. Pre-assessment, 4. Assessment, 5. Result, and 6. Finalize. Below the progress bar, the 'Compliance' section asks 'Do you comply with voluntary sustainability standards?' and lists 'Standards I comply with already'. It features three rows for adding standards, each with a 'Standard name', 'Document name', and 'Document type' field, and a '+ Add proof document' button. A '+ Add standard' button and a 'Back' button are also present.

Two modal windows are overlaid on the main interface:

- Add proof document:** This window contains fields for 'Document name', 'Document type', 'Product', and 'Description' (with a 'Maximum 200 words' limit). It also includes a 'Document validity' section with 'Start date' and 'Expire date' fields, and an 'Upload file' section with a 'Choose File' button and 'No file chosen' text. At the bottom, there are 'Delete document', 'Close', and 'Save document' buttons.
- Select standard:** This window prompts the user to 'Select one or more standards you already comply with. In the next step, you'll be able to upload proof documents for each standard.' It features a search bar 'Filter on standard name...' and a list of standards, each with a checkbox. The first standard, 'Harvested by Women Norms and Standards', is selected. A 'Finish' button is at the bottom.

**Figure 5.2.** In the Danish Sustainability Map web tool, producers may add standards they already comply with as well as audit reports from the Danish public compliance control to their profiles and share this information with their customers.

As described in section 2.9, the new strategy for the control of food and feed companies open up for a reduced number of control inspections if the company has a certified quality management system. The control authorities, in this case the Veterinary and Food Administration, will carry out an administrative control of the audit report of the company's quality management system. If the audit report is approved, the frequency of inspection may be reduced or the inspection is reduced in scope (Mathisen 2016, pers. com.). Thus, the communication function of the Sustainability Map may also run the other way; audit reports from private certification bodies may be shared with Danish control authorities which now have the option to ease the extent of control if relevant control points have already been audited and approved by a third party. The Danish food companies that were interviewed for this report, all mentioned that the private audits carried out by large international buyers are much more stringent than the public control audits; which indicates that the suggested use of the Sustainability Map communication feature is relevant. This function may be



implemented by the optional sharing by companies and farmers of specific documents on their Sustainability Map profile with public authorities. As discussed earlier and mentioned by a senior consultant at Arla Foods (Hendriksen 2016, pers. com.), the reduced number of inspections based on private audit reports and the new set of orders for food control with guidelines for differentiated inspection frequency may actually increase the complexity of communicating regulation compliance by Danish companies to international customers. As a large dairy company, Arla Foods may not want to be in a position where they need to explain to customers why one of their dairy plants receives more inspections than another, but rather prefer to communicate a fixed public control plan. The use of an online platform such as the Sustainability Map would need to take this into consideration.

The need for a fixed public control plan could be considered if a broader use of Sustainability Map for public compliance control is possible, e.g. administrative control of companies' self-assessment and sustainability diagnostics. This would require certain build-in data control measures to avoid false reporting. Taking it a step even further, company profiles may be linked with "big data" databases such as the UN Global Compact or the one of GS1 based on the Global Location Number, which registers the location and other characteristics of registered producers. Alternatively, profiles may be populated with the companies' own data collection regarding environmental protection, animal welfare and other sustainability measures of food production. The collection of big data in agriculture and food production is receiving increased attention, e.g. at OECD (Poppe 2016), at Big Data Europe (2015; 2016) and among scientific scholars (e.g. Bronson & Knezevic 2016; Sonka 2016; Wolfert et al. 2017). It is also the focus of the Panel for Digital Growth proposed by the Danish Agriculture and Food Council, which will have the objective of using big data to create growth in the Danish food sector (L&F 2016), and big data is also mentioned in the new common control strategy (MFVM 2017).

It is not within the scope of this report to further discuss the possibilities of sustainability diagnostics, management and auditing afforded by collection and analysis of big data. With the increasing digitalisation of modern food production – from land use and livestock management over food processing and manufacturing to trading and company linkages – it is a matter of time before big data and online platforms, such as the Sustainability Map, will be further integrated into sustainability and quality management and control.



## References

- Akkerman, R., Farahani, P. & Grunow, M. 2010. Quality, safety and sustainability in food distribution: a review of quantitative operations management approaches and challenges. Springer-Verlag.
- Antle, J.M. 2001. Economic analysis of food safety. In: Gardner, B.L., Rausser, G.C. (eds): Handbook of Agricultural Economics, Vol. 1 part B, p. 1083-1136. Elsevier, Netherlands.
- AWNM n/d. Agency for Water and Nature Management [Online: 21/12-2016] <http://svana.dk/om-os/organisation/>
- Berg, L., Kjærnes, U., Ganskau, E., Minina, V., Voltchkova, L., Halkier, B. & Holm, L. (2006). Trust in food safety in Russia, Denmark and Norway. European Societies 7 (1), 103-129.
- Big Data Europe 2015. Big Data Europe for Food and Agriculture. 1 st Workshop Report. Available online: <https://www.big-data-europe.eu/wp-content/uploads/BDE-SC2-1st-workshop-Finalreport.pdf>
- Big Data Europe 2016. Second Community Workshop for Societal Challenge 2 – Food and Agriculture. Available online: <https://www.big-data-europe.eu/wp-content/uploads/Final-report-Second-Community-Workshop-for-Societal-Challenge-2—Food-and-Agriculture.pdf>
- Bosselmann, A.S. 2012. Definition af industriel bæredygtighed i landbrugs- og fødevarerektoren. FOI Udredning, Nr. 2012/32, 6 p. Available online: [http://curis.ku.dk/ws/files/160610258/FOI\\_Udredning\\_2012\\_32.pdf](http://curis.ku.dk/ws/files/160610258/FOI_Udredning_2012_32.pdf)
- Bronson, K. & Knezevic, I. 2016. Food studies scholars can no longer ignore the rise of big data. Canadian Food Studies 3 (1), 9-19.
- Christensen, T., Denver, S., Hansen, H.O. & Lind, K.M.H. (2017). Analyse af det veterinære beredskabs betydning for markedsadgang for dyr og animalske produkter. IFRO Udredning 2017/19. Available online: [https://curis.ku.dk/ws/files/185038026/IFRO\\_Udredning\\_2017\\_19.pdf](https://curis.ku.dk/ws/files/185038026/IFRO_Udredning_2017_19.pdf)
- DAA n/d. The Danish Agricultural Agency [Online: 07/09-2017] <http://agrifish.dk/about-us/organisation/>
- DG(Sante) 2018. Denmark Country Profile: Organisation of official controls. DG Health and Food Safety. 86 pp.
- DVFA n/d. Danish Veterinary and Food Administration [Online: 25/03-2018] <https://www.foedevarestyrelsen.dk/english/Aboutus/Organization/Pages/default.aspx>
- DWEA n/d. The Danish Working Environment Authority [Online: 07/09-2017] <https://arbejdstilsynet.dk/da/om%20arbejdstilsynet/organisation>
- DWEA n/d. The Danish Working Environment Authority [Online: 30/01-2019] <https://amid.dk/>
- EC 2012/C 150/08. Offentliggørelse af en ansøgning om ændring i henhold til artikel 6, stk. 2, i Rådets forordning (EF) nr. 510/2006 om beskyttelse af geografiske betegnelser og oprindelsesbetegnelser for landbrugsprodukter og fødevarer.
- EC 2017. Final Report of an Audit carried out in Denmark. European Commission. Available online: [http://ec.europa.eu/food/audits-analysis/act\\_getPDF.cfm?PDF\\_ID=13155](http://ec.europa.eu/food/audits-analysis/act_getPDF.cfm?PDF_ID=13155)
- EPA n/d. Environmental Protection Agency [Online: 07/09-2017] <http://mst.dk/service/om-miljoestyrelsen/organisation/>
- FVST 2017. Danmarks flerårige nationale kontrolplan 2017-2021. FVST J. nr. 2017-34-115-00023. Ministry of Environment and Food of Denmark.
- Hansen, H.O., Elleby, C. & Gylling, M. (2017). Højpris- og højkvalitetsprodukter og den danske eksport af landbrugs- og fødevarer. Tidsskrift for Landøkonomi 203 (1), 55-93.
- L&F 2016. Nyt panel skal sætte turbo på digital vækst i fødevarerektoren. Danish Agriculture and Food Council. Online article 14.12.16: <http://lf.dk/aktuelt/nyheder/2016/december/nyt-panel-skal-saette-turbo-paa-digital-vaekst-i-foedevaresektoren#.WFml-k2Qyh1>
- Ministry of Employment 2015. En styrket arbejdsmiljøindsats – Alle har ret til et sikkert og sundt arbejdsmiljø. Political agreement made on 26. March 2015. Available online: [https://bm.dk/media/6478/aftaletekst\\_arbejdsmiljoe-pdf.pdf](https://bm.dk/media/6478/aftaletekst_arbejdsmiljoe-pdf.pdf)

- MFVM n/d. The Ministry of Environment and Food [Online: 07/09-2017] <http://en.mfvm.dk/the-ministry/>
- MFVM 2017. Den fælles kontrol strategi – kontrol baseret på tillid. The Ministry of Environment and Food, October 2017.
- Poppe, K. 2016. Big opportunities for big data in food and agriculture. LEI Wageningen UR. Presented at OECD Workshop February 2016. Available online: <https://www.oecd.org/tad/events/Session%20Krijn%20Poppe%20OECD%20Big%20Data.pdf>
- Pouliot, S. & Sumner, D.A. 2008. Traceability, Liability, and Incentives for Food Safety and Quality. American Journal of Agricultural Economics 90 (1), 15-27.
- RFO 834/2007. Rådets Forordning - om økologisk produktion og mærkning af økologiske produkter og om ophævelse af forordning. Rådet for den Europæiske Union. Artikel 27, stk. 3.
- Sonka, S.T. (2016). Big Data: Fueling the Next Evolution of Agricultural Innovation. Journal of Innovation Management 4, 114-136.
- Stokholm, K. 2016. Arbejdstilsynet er blevet mere målrettet. Agenda. Online article: <http://www.agenda.dk/2016/09/arbejdstilsynet-er-blevet-mere-maalrettet/>
- Wolfert, S., Ge, L., Verdouw, C. & Bogaardt, M.-J. 2017. Big Data in smart farming – a review. Agricultural Systems 153, 69-80.

## Interviews

- Bonde, A., KMC, Lawyer, EC Affairs. [Mail 16/1 2017] Herningvej 60, 7330 Brande. Tlf: 96425515. [Ab@kmc.dk](mailto:Ab@kmc.dk)
- Hendriksen, S., Arla Foods, Senior Consultant, Global Trade Policy & Regulatory Affairs. [Interview 16/12 2016]. Viby J.
- Jensen, J.W., Thise Mejeri, Quality manager. [Mail 7/12 2016] Sundsørevej 62, Thise, 7870 Roslev, Tlf: 97578001. [jwj@thise.dk](mailto:jwj@thise.dk)
- Jensen, S., Atria Danmark, export manager. [Mail 5/12 2016] Langmarksvej 1, 8700 Horsens, Tlf: 76282500. [soeren.jensen@atria.com](mailto:soeren.jensen@atria.com)
- Kielberg, L., Environmental Protection Agency. Manager Commercial Business. [Mail 14/12 2016]. Strandgade 29, 1401 København K.
- Kousgaard, L., Daloon, Nordic Sales and Marketing Manager. [Mail 17/01 2017]. Delfinvej 3, 5800 Nyborg, Tlf: 23212583. [lko@daloon.com](mailto:lko@daloon.com)
- Laustsen, J., Danish Food and Agriculture Council. Director Trade, Market & Nutrition. [Meeting 29/11 2016]. Axelborg, Axeltorv 3, 1609 København V.
- Mathisen, J.L., Danish Veterinary and Food Administration. Special consultant, Control Management. [Meeting 13.12.2016]. Stationsparken 31-33, 2600 Glostrup.
- Nielsen, A., Danish AgriFish Agency. Head of section. Physical Agricultural Control. [Meeting 12/12 2016]. Nyropsgade 30, 1780 København V.
- Nielsen, B., St. Clemens, Kvalitetschef. [Mail 17/1 2017] Sct. Klemensgade 17, 3782 Klemensker, Tlf: 60106034. [Kvalitet@st-clemens.dk](mailto:Kvalitet@st-clemens.dk)
- Petersen, C.A., Espersen A/S, Director Consumer, Sales. [Interview 17/1 2017]. Tlf: 56906010.
- Selisek, M., Danish Working Environment Authority, lawyer. [Mail 5/1 2017] Landskronagade 33, 2100 København Ø, Tlf: 72209024. [mps@at.dk](mailto:mps@at.dk)
- Tinggaard, S., Danish Crown, Underdirektør, Eksportafdelingen. [Interview 25/1 2017]. Tlf: 89191919. [SRT@danishcrown.dk](mailto:SRT@danishcrown.dk)
- Zøfting-Larsen, L., Dansk Industri Fødevarer, Chefkonsulent. [Interview 3/1 2017]. København K.

## Internal screening documents

MST 2016. Spørgeskema B: Spørgsmål til kortlægningen. Miljøstyrelsen: Kontrolområde: Virksomheder og husdyrbrug. [dato: 21. juni 2016].

NAER 2016. Spørgeskema B: Spørgsmål til kortlægningen. NaturErhvervsstyrelsen: Kontrolområde: NAER, Økologikontrol. [dato: 21. juni 2016]

## Appendix A. Sustainability Map indicators and overlap

Requirements in the Sustainability Map database covered by the public compliance control, as estimated by the authors. Excerpts of the database have been crosschecked by the relevant public agencies, but the final assessment has been carried out by the authors. The category Quality Management Systems is left out as described in section 2.10.

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| <b>ENVIRONMENT</b>  | <b>249</b>                | <b>102</b>                    |
| <b>Soil</b>   | <b>14</b>                 | <b>5</b>                      |
| Soil: general principle   | 2060                      | x                             |
| Soil erosion  | 2059                      |                               |
| Soil conservation   | 800000                    | x                             |
| Soil quality  | 2055                      |                               |
| Soil nutrients  | 2058                      |                               |
| Soil fertility  | 800001                    |                               |
| Soil productivity   | 800002                    |                               |
| Soil biodiversity   | 800003                    |                               |
| Soil contamination  | 10060                     | x                             |
| Soil preparation for specific crops / plant spacing   | 300620                    |                               |
| Soil enhancement by crop rotation or intercropping  | 300622                    | x                             |
| Soil enhancement by use of cover crops  | 701332                    | x                             |
| Soil compaction   | 60000                     |                               |
| Other criteria relating to soil   | 2057                      |                               |
| <b>Forests</b>  | <b>19</b>                 | <b>5</b>                      |
| Forestry issues: general principle  | 2074                      | x                             |
| Criteria related to regeneration of tree cover after logging (e.g. to pre-harvesting situation)   | 2069                      | x                             |
| Principles and criteria to prevent and/or remediate deforestation (e.g. use tree species for regeneration that are well adapted to site conditions) | 2071                      |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Principles and criteria to enhance conservation of forests  | 2073                      |                               |
| Principles and criteria for the conversion of forests into production lands   | 2072                      | x                             |
| Principles and criteria for the conversion of agriculture land to non-agriculture purposes  | 700333                    | x                             |
| Criteria relating to maintenance of records of forests at least 5-years period  | 300621                    |                               |
| Criteria related to forest management plan (FMP) baseline objectives and assessment of current conditions (stockings, species, age classes of trees etc.)                         | 700335                    |                               |
| Criteria related to preparation of public summary of the forest management plan (FMP)   | 700336                    |                               |
| Criteria related to inclusion of all forest resources in at least long-term objectives of forest management plan (FMP)  | 700337                    |                               |
| Criteria related to use of verifiable targets in FMP by which progress can be assessed  | 700338                    |                               |
| Criteria related to FMP annual allowable cut  | 700339                    |                               |
| Criteria related to FMP annual allowable exploitation of non-timber forest products   | 700340                    |                               |
| Criteria related to FMP results be incorporated in a consistent and replicable monitoring system  | 700342                    |                               |
| Criteria related to monitoring of forests resources and management practices that reflect natural disturbance   | 700343                    |                               |
| Criteria related to making publicly available FMP monitoring results  | 700344                    |                               |
| Legal compliance: Harvest rights  | 740200                    | x                             |
| Legal compliance: Payments for harvest rights   | 740201                    |                               |
| Other criteria relating to forestry conservation (e.g. prohibition of genetically modified trees, natural/semi natural forests reflecting natural disturbance, scenic landscapes) | 2070                      |                               |
|   |                           |                               |
| <b>Chemicals / Natural Organic Inputs</b>   | <b>33</b>                 | <b>23</b>                     |
| Chemicals / Natural organic inputs: general principle   | 2109                      | x                             |
| Prohibition of use of any pesticides, biological control of pests and other related chemical substances.  | 2108                      | x                             |
| Prohibition of use of hazardous chemicals (as defined by WHO 1A and B, 2 and the Stockholm and Rotterdam conventions)   | 2100                      | x                             |
| Prohibition of use of hazardous chemicals (as defined by the PAN International List of Highly Hazardous Pesticides)   | 740202                    | x                             |
| Respect of list of permitted chemicals of low concern for the intended use of product   | 700345                    |                               |
| Respect list of prohibited chemicals as harmful to human health   | 740203                    | x                             |
| Criteria related to the restrictions on surfactants, cleaning agents and foam inhibitors  | 800004                    |                               |
| Criteria related to appropriated tests of "toxicity"  | 800005                    |                               |
| Use of biological control agents must comply with internationally recognized standards (e.g. authorized list of substances)   | 2651                      | x                             |

| Category   | No of indicators/category | Covered by compliance control |
|--|---------------------------|-------------------------------|
| Implementation of an Integrated Pest Management (IPM)  | 2106                      | x                             |
| Training on Integrated Pest Management (IPM)   | 60002                     |                               |
| Chemicals and related materials: general principle   | 2575                      | x                             |
| Chemicals use and application records  | 2098                      | x                             |
| Chemicals storage and labelling  | 60004                     | x                             |
| Chemicals equipment and containers storage & cleaning  | 60006                     | x                             |
| Protection of non-target areas from agro-chemical use  | 60008                     | x                             |
| Regular re-calibration of agro-chemicals application equipment   | 60010                     |                               |
| Production / process chemicals (extractive industries - cleaning - food & non-food manufacturing)  | 4093                      |                               |
| Organic natural inputs: general principles & practices   | 2576                      | x                             |
| Use of organic fertilizer  | 700347                    | x                             |
| Equipment maintenance, cleaning and warehousing procedures   | 2107                      | x                             |
| Chemicals : selective & targeted application   | 60024                     | x                             |
| Training on chemicals handling and exposure  | 60012                     |                               |
| Chemicals variation to prevent pest resistance   | 60014                     |                               |
| Chemical substances storage/disposal/waste/labelling   | 2099                      | x                             |
| Treatment of waste of chemical substances and related materials  | 2577                      | x                             |
| Criteria related to use and management of hazardous chemicals  | 800006                    | x                             |
| Criteria related to biodegradability of chemicals  | 800007                    |                               |
| General prohibition of use of GMOs / genetically modified varieties  | 2655                      | x                             |
| Criteria for use and management of GMOs / genetically modified materials   | 2653                      | x                             |
| Criteria for risk prevention with regards to use of GMOs / genetically modified varieties (invasion / cross-pollination / contamination& ) | 2654                      | x                             |
| Criteria relating to traceability and labelling of genetically modified crops and products   | 300641                    | x                             |
| Other  | 2101                      |                               |
|  |                           |                               |
| <b>Biodiversity</b>  | <b>39</b>                 | <b>17</b>                     |
| Overarching policy or set of principles on biodiversity  | 2127                      | x                             |
| Criteria to ensure adherence to international conventions on biodiversity and best practices (CITES, CBD, CMS, CCD, among others)          | 700368                    | x                             |
| Sustainable management and use of natural resources  | 30015                     |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Habitat/ecosystem restoration / rehabilitation  | 2124                      |                               |
| Impact assessment policy for new production   | 4092                      | x                             |
| Requirements for net positive gain in biodiversity  | 172031                    |                               |
| Protection of rare and threatened species and their habitats  | 700369                    | x                             |
| Requirements for no net loss in biodiversity  | 30018                     |                               |
| Impact mitigation prior to production / harvesting operations   | 30020                     |                               |
| Criteria for creating / maintaining / protecting set asides or buffer zones   | 4091                      | x                             |
| Criteria for creating / maintaining /protecting ecological niches / corridors   | 2126                      |                               |
| Criteria related to maintaining or protecting rare, threatened or endangered ecosystems   | 700370                    | x                             |
| Criteria to avoid crop disease cross-contamination  | 60018                     | x                             |
| Criteria for monitoring / preserving aquaculture density/ diversity   | 2658                      |                               |
| Diversity of planting materials, seeds and crops genotypes  | 2657                      |                               |
| Criteria related to maintaining, restoring, prioritizing native species (e.g. native vegetation along streams and watercourses)                     | 10072                     |                               |
| Criteria related to the protection of ecosystems against invasive species   | 700371                    | x                             |
| Criteria for the monitoring and protection of High Conservation Value Areas   | 4090                      |                               |
| Prohibition of production on land with High Conservation Value (HCV) with conversion cut-off date no later than 2009 or at least five years history | 700372                    |                               |
| Criteria related to HCV as intended in the HCV Resource Network   | 700373                    |                               |
| Prohibition of production on land with High Conservation Area recognized by independent expertise   | 701001                    |                               |
| Criteria related to legally protected and internationally recognized areas for their biodiversity   | 30022                     | x                             |
| Criteria relating to identifying risks and impacts on ecosystem services  | 30024                     |                               |
| Criteria for the use of biotechnologies   | 4089                      | x                             |
| Practices and criteria for open pit/underground (extractive metals practices)   | 4088                      |                               |
| Criteria and practices relating to the clearing of land with fire or explosives   | 4094                      |                               |
| Criteria relating to post-production practices (impact assessment - rotation of crops& )  | 4087                      |                               |
| Criteria relating to human settlements in or close to production areas  | 2063                      | x                             |
| Other criteria relating to biodiversity (e.g. offsets / compensation policies)  | 2122                      |                               |
| Criteria related to natural wetlands and/or watercourses affected by production   | 700374                    | x                             |
| Criteria related to sustainable harvesting  | 700375                    |                               |
| Wildlife - general principle  | 10064                     | x                             |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Criteria for regulated and sustainable access to resources and use of wildlife species  | 10066                     |                               |
| Specific criteria relating to rare, threatened or endangered wildlife species   | 700575                    | x                             |
| Criteria for regulated and suitable housing of wildlife living specimens  | 10068                     |                               |
| Criteria for minimized impacts on wildlife populations  | 10070                     |                               |
| Specific criteria for wild catch fisheries: procedures regarding management and reduction of discards - non target species                          | 800038                    | x                             |
| Specific criteria for wild catch fisheries: prohibition of destructive fishing methods such as dynamite and poison                                  | 800039                    | x                             |
| Specific criteria for wild catch fisheries: sustainable exploitation of marine resources including restoration of overfished and depleted stocks    | 800040                    | x                             |
|   |                           |                               |
| <b>Animals - Livestock</b>  | <b>28</b>                 | <b>17</b>                     |
| Animals - Livestock: general principle  | 2134                      | x                             |
| **Criteria relating to breeding   | 2133                      |                               |
| General criteria related to animals feeding   | 2132                      | x                             |
| Animal feed responsible sourcing policy   | 800041                    |                               |
| **Specific criteria on origin of animal feed  | 700376                    | x                             |
| **Special criteria on quality of animal feed  | 700377                    | x                             |
| **Special requirements for organic animal feed  | 700378                    | x                             |
| Criteria related to animals medication  | 2659                      | x                             |
| Criteria related to procedures to prevent the spread of animal disease  | 800042                    | x                             |
| General criteria related to animals welfare   | 4086                      | x                             |
| Criteria related to animal testing  | 800008                    |                               |
| Criteria related to transport of animals  | 300642                    | x                             |
| **Criteria related to slaughter (slaughtering process; minimum age& )   | 300644                    | x                             |
| **Criteria related to the use of electric prods with livestock  | 700379                    | x                             |
| **Criteria related to techniques to be used for animal identification and/or castration   | 700380                    | x                             |
| **Criteria related to animals' physical integrity (e.g. criteria that prohibit the removing of tails, ears, nose, wings, horns or other body parts) | 700381                    | x                             |
| Criteria related to litter / manure   | 300646                    | x                             |
| **Criteria related to livestock density following at least official regulations (e.g. EC Regulation 889/2008)                                       | 300648                    | x                             |
| **Criteria related to outdoor access (livestock)  | 300650                    | x                             |



| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| <b>**Criteria related to animal housing</b>   | 300652                    | x                             |
| Specific criteria for beekeeping: interior / exterior housing   | 300658                    |                               |
| Specific criteria for beekeeping: honey extraction process  | 300660                    |                               |
| Specific criteria for aquaculture: polyculture  | 300654                    |                               |
| Specific criteria for aquaculture: analysis of water quality  | 300656                    |                               |
| Specific criteria for aquaculture: systems in place to minimize the unintentional release or escape of farmed species | 800043                    |                               |
| Specific criteria for aquaculture: use of hatchery raised seed  | 800044                    |                               |
| Specific criteria for aquaculture: prohibition of prophylactic use of antimicrobials                                  | 800045                    |                               |
| Other criteria relating to animals treatment  | 2130                      |                               |
|   |                           |                               |
| <b>Waste</b>  | <b>27</b>                 | <b>9</b>                      |
| <b>**Waste management: general principle</b>  | 2052                      | x                             |
| Criteria related to treatment and use of solid waste  | 22577                     | x                             |
| <b>**Criteria relating to monitoring and measuring solid waste volumes</b>  | 700382                    |                               |
| <b>**Criteria relating to reducing solid waste volumes</b>  | 700383                    |                               |
| <b>**Criteria relating to monitoring and measuring waste toxicity</b>   | 700384                    |                               |
| <b>**Criteria for reducing / re-use / recycle solid waste</b>   | 2042                      |                               |
| Criteria related to treatment and use of non-solid waste  | 4084                      | x                             |
| <b>**Criteria related to waste segregation</b>  | 700385                    | x                             |
| Criteria related to prevention of run-off of waste chemicals, mineral and organic substances                          | 300661                    | x                             |
| Air quality / pollution monitoring  | 10076                     | x                             |
| <b>**Air pollution along the textiles production process (SSCT)</b>   | 700386                    |                               |
| <b>**S and NOx emissions for paper industry (SSCT)</b>  | 700387                    |                               |
| <b>**Pollution incidents mitigation: procedures for risks monitoring and records keeping</b>                          | 700388                    |                               |
| Mitigation of (transboundary) effects of air pollution  | 30026                     |                               |
| Noise, odour and other pollution nuisance   | 10078                     | x                             |
| Principles and practices related to composting  | 2051                      | x                             |
| Principles and practices related to tailings  | 4083                      |                               |
| Principles and practices related to packaging   | 2650                      |                               |
| Waste disposal (incl. solid waste, non-solid waste, excl. hazardous waste)  | 2050                      |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| **Specific criteria for disposal of hazardous waste   | 700389                    | x                             |
| **Specific requirements for handling / disposal of waste by third parties   | 30031                     |                               |
| ** Principles and practices related to the use of fire to eliminate waste (prevention uncontrolled on-site waste burning) | 2046                      |                               |
| ** Principles and practices related to avoidance of uncontrolled waste landfilling  | 700390                    |                               |
| Other criteria relating to waste management   | 2045                      |                               |
| Environmental friendly purchasing policy (building materials and consumables)   | 10080                     |                               |
| Disposables measured/reduced  | 10082                     |                               |
| ** Disposal of the product (SSCT - paper specific)  | 700391                    |                               |
|   |                           |                               |
| <b>Water</b>  | <b>15</b>                 | <b>8</b>                      |
| **Water resources monitoring, use and consumption   | 2037                      | x                             |
| Water management plan   | 300663                    | x                             |
| Water dependencies and water scarcity   | 2036                      |                               |
| Water reuse, recycling and harvesting   | 2032                      |                               |
| Wastewater quality management and treatment   | 2031                      | x                             |
| **Criteria relating to limitations of wastewater volume   | 700392                    | x                             |
| **Wastewater parameters for paper industry  | 700395                    |                               |
| Surface and ground water contamination / pollution  | 10084                     | x                             |
| Mitigation of transboundary effects of water pollution  | 30032                     |                               |
| **Quality of water used in production (agriculture, forestry)   | 4081                      |                               |
| Principles and practices related to water disposal / storage  | 2035                      | x                             |
| Water extraction / irrigation   | 10086                     |                               |
| Natural wetlands are maintained in undrained conditions   | 800009                    | x                             |
| Water usage records keeping   | 60020                     | x                             |
| Other criteria relating to water  | 2034                      |                               |
|   |                           |                               |
| <b>Energy</b>   | <b>12</b>                 | <b>4</b>                      |
| Criteria on energy consumption monitoring / recording   | 2091                      | x                             |
| Criteria relating to the application of a set of clean production practices   | 30034                     |                               |
| Criteria to reduce use of energy resources  | 2084                      |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Criteria related to storage of energy (incl. fuel, electricity & )  | 60022                     | x                             |
| Criteria for the use of alternative energies including solar, wind, etc.  | 2077                      |                               |
| Specific criteria for the use of solar energy   | 2080                      |                               |
| Specific criteria for the use of hydropower energy  | 2082                      |                               |
| Specific criteria for the use of wind energy  | 2079                      |                               |
| Specific criteria for the use of wood-based energy  | 2078                      |                               |
| Criteria for the use of biofuels  | 2083                      | x                             |
| Criteria for the use of non-renewable energies: general principle   | 2581                      |                               |
| Other criteria related to energy consumption and management   | 800010                    | x                             |
|   |                           |                               |
| <b>Climate - Carbon</b>   | <b>18</b>                 | <b>1</b>                      |
| Carbon policies: general principle  | 2582                      | x                             |
| **Criteria for monitoring GHG carbon emissions  | 2583                      |                               |
| Requirements to perform analysis of possible alternatives to reduce GHG emissions   | 30038                     |                               |
| Requirements to quantify GHG emissions  | 30040                     |                               |
| Criteria for reducing GHG emissions   | 2117                      |                               |
| Sequestration of green-house gases: general principle   | 700396                    |                               |
| Criteria relating to soil or trees sequestration  | 2114                      |                               |
| High Carbon Stock areas monitoring and management   | 800011                    |                               |
| **Prohibition of production on land with High Carbon Stock (HCS) with conversion cut-off date no later than 2009 or at least five years history | 700397                    |                               |
| Criteria for using offsets  | 2115                      |                               |
| **Criteria relating to specific climate adaptation activities   | 701327                    |                               |
| Principles and criteria for Carbon Neutrality   | 4288                      |                               |
| Carbon standards' specific criteria relating to offset externalities  | 4282                      |                               |
| Carbon standards' specific criteria relating to additionality tests   | 4283                      |                               |
| Carbon standards' specific criteria relating to registry of carbon project  | 4284                      |                               |
| Carbon standards' specific criteria relating to type of project   | 4285                      |                               |
| Carbon standards' specific criteria relating to crediting periods   | 4287                      |                               |
| Other criteria related to carbon policies and management  | 800012                    |                               |

| Category   | No of indicators/category | Covered by compliance control |
|--|---------------------------|-------------------------------|
| <b>Other - SSCT Environment</b>  | <b>44</b>                 | <b>10</b>                     |
| Criteria related to synthetic pesticides, as defined in the EU Organic Farming Regulation  | 700348                    | x                             |
| Criteria related to on synthetic fertilizers   | 700349                    |                               |
| Criteria related to the use of biocides in the finishing process   | 700350                    |                               |
| Criteria related to the use of formaldehyde  | 700351                    | x                             |
| Criteria related to the use of nanomaterials   | 700352                    |                               |
| Criteria related to the use of flame retardants  | 700353                    | x                             |
| Criteria related to the biodegradability of substances   | 700354                    |                               |
| Criteria related to the use of dyes or pigments based on lead copper, chromium, nickel and aluminium   | 700355                    | x                             |
| Criteria related to the use of azo dyes that may cleave aromatic amines which are harmful to human health  | 700356                    |                               |
| Criteria related to the use of chlorine gas as bleaching agent   | 700357                    | x                             |
| Criteria related to chemicals described as a risk to the environment   | 700358                    | x                             |
| Criteria related to chemicals described as a risk to human health  | 700359                    | x                             |
| Criteria related to testing the final product regarding accumulation of chemical residues  | 700360                    |                               |
| Criteria related to biological control to prevent or suppress harmful organisms  | 700361                    |                               |
| Criteria related to the monitoring harmful organisms by observations in the field or warning, forecasting and early diagnosis systems (e.g. traps) | 700362                    |                               |
| Criteria related to the principle to use pesticides as last resort only  | 700363                    |                               |
| Criteria related to the production of natural fibres   | 700364                    |                               |
| Criteria related to the production of synthetic fibres   | 700365                    |                               |
| Criteria related to the usage of recycled fibres   | 700366                    |                               |
| Criteria related to the use of wooden fibres   | 700367                    |                               |
| Criteria related to energy consumption in the production phase   | 800048                    | x                             |
| Criteria related to the usage of renewable energy in the production phase of the hardware  | 800049                    |                               |
| Criteria related to F-GHG emissions  | 800050                    |                               |
| Criteria related to power consumption and power management (during the use phase)  | 800051                    | x                             |
| Criteria related to providing information concerning possible power savings to the user  | 800052                    |                               |
| Criteria related to H statements H340, H341, H350, H351, H360, H361  | 800053                    |                               |
| Criteria related to the use of mercury, cadmium, lead, chromium VI   | 800054                    | x                             |

| Category   | No of indicators/category | Covered by compliance control |
|--|---------------------------|-------------------------------|
| Criteria related to the use of plasticizers with adverse environmental and health impact   | 800056                    |                               |
| Criteria related to the use of polymers containing halogens  | 800057                    |                               |
| Criteria related to clear coding of used materials   | 800058                    |                               |
| Criteria related to the recyclability of plastics used   | 800059                    |                               |
| Criteria related to disassembly of the product for recycling   | 800060                    |                               |
| Criteria related to a take back system for the product   | 800061                    |                               |
| Criteria related to the use of recycled material in the packaging  | 800063                    |                               |
| Criteria related to the use of postconsumer recycled content in the product  | 800064                    |                               |
| Criteria related to noise emissions during the use phase   | 800065                    |                               |
| Criteria related to environmental management instruments like EMAS or ISO 14001  | 800066                    |                               |
| Criteria related to an additional lifetime guarantee for the product beyond the legal obligations  | 800067                    |                               |
| Criteria related to the quality / durability of specific components  | 800068                    |                               |
| Criteria related to a modular design of the product  | 800069                    |                               |
| Criteria related to the availability of spare parts for the product  | 800070                    |                               |
| Criteria related to properties of the battery  | 800071                    |                               |
| Criteria related to expansion facilities of the product  | 800072                    |                               |
| Criteria related to providing information concerning reparability, upgradeability and usage of the battery to the user   | 800073                    |                               |
|  |                           |                               |
| <b>SOCIAL</b>  | <b>154</b>                | <b>39</b>                     |
|  |                           |                               |
| <b>Human rights and local communities</b>  | <b>45</b>                 | <b>5</b>                      |
| Human rights and local communities: general principle  | 2026                      | x                             |
| **Basic human rights and local communities engagement  | 700398                    | x                             |
| **Criteria relating to assessing production practices possible impacts on food security  | 2019                      |                               |
| Criteria relating to production practices promoting healthy / high nutritional value foods. SSCT - Question: Does the standard include criteria on production practices promoting healthy and nutrient dense food? | 300665                    |                               |
| **Criteria related to production practices that reduce food and feed waste   | 700399                    |                               |
| Criteria relating to the promotion/enhancement of education  | 2013                      |                               |
| Criteria relating to the promotion/enhancement of medical care services  | 2023                      |                               |
| Criteria relating to the promotion/enhancement of housing and sanitary facilities  | 2015                      |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Gender issues: general principle  | 2533                      | x                             |
| Criteria relating to gender policies and best practices   | 2532                      |                               |
| Criteria relating to women's access to health and safety services   | 2530                      |                               |
| Criteria relating to factoring gender considerations in impacts and risks assessment of production  | 30042                     |                               |
| Criteria relating to factoring gender considerations in stakeholder engagement process  | 30044                     |                               |
| **Criteria relating to indigenous peoples as defined in ILO convention 169  | 2022                      |                               |
| **Criteria relating to the protection of minority and indigenous rights   | 2021                      |                               |
| **Criteria relating to the protection of minority rights and marginalized groups  | 708000                    | x                             |
| **Criteria relating to socio-cultural sites   | 10092                     |                               |
| Criteria relating to historical, cultural and archeological artifacts trade   | 10094                     |                               |
| Criteria on using local art, architecture and/or cultural heritage in design / for commercial purposes  | 10096                     |                               |
| Criteria relating to internationally recognized / legally protected sites and cultural heritage   | 10098                     |                               |
| Criteria related to community access to cultural heritage   | 30046                     |                               |
| Criteria relating to interpretive materials and behavior guidelines   | 10100                     |                               |
| Criteria on local access to historical, cultural, archeological and spiritually important properties and sites  | 10102                     |                               |
| Criteria relating to establishment of a code of conduct for local and indigenous communities  | 10104                     |                               |
| Criteria relating to community investment: services and benefits offered to communities beyond the business' operations (education, health, sanitation) | 2025                      |                               |
| **Criteria related to compensation for use of local communities facilities (traditional knowledge, infrastructure access and benefits sharing)          | 700400                    |                               |
| Engagement & consultation with local communities  | 2024                      |                               |
| Criteria relating to land title and use rights  | 4078                      | x                             |
| **Criteria related to supporting local communities economic development   | 700401                    |                               |
| **Criteria relating to hiring workers from local communities  | 2017                      |                               |
| **Criteria relating to purchasing local materials, goods, products and services   | 10106                     |                               |
| Criteria relating to traditional and cultural production practices  | 300667                    |                               |
| Criteria relating to grievance mechanisms for affected communities  | 30049                     |                               |
| Criteria relating to conduct of security personnel towards communities  | 30051                     |                               |
| Criteria relating to assessment of impacts of local activities on human rights issues such as health, safety and security                               | 30048                     |                               |
| Criteria relating to impact assessment on access to basic services to local communities   | 30050                     |                               |
| Criteria relating to involuntary resettlement, physical displacement and/or economic displacement   | 30052                     |                               |

| Category   | No of indicators/category | Covered by compliance control |
|--|---------------------------|-------------------------------|
| Criteria relating to compensation and benefits for displaced persons   | 30054                     |                               |
| Criteria relating to planning / implementation of resettlement activities  | 30056                     |                               |
| Criteria relating to livelihood restoration for displaced persons  | 30058                     |                               |
| **Criteria related to land investments and associated possible impacts on land-users   | 700402                    |                               |
| Criteria relating to Free, Prior and Informed Consent (FPIC) of local communities  | 1952                      |                               |
| Producers are required to identify legal and customary rights of tenure (incl. access and use of other parties that apply on the production/management unit) | 700403                    |                               |
| Obligation to identify legal and customary rights of tenure (incl. access and use of other parties to production/management unit)                            | 701003                    |                               |
| **Criteria relating to activities not adversely affecting local communities access to livelihoods  | 300461                    |                               |
|  |                           |                               |
| <b>Labor practices - Conditions of work and social protection</b>  | <b>32</b>                 | <b>24</b>                     |
| Working conditions overarching principles  | 2586                      | x                             |
| Criteria relating to women's rights at work  | 2531                      | x                             |
| Criteria relating to sexual exploitation / harassment  | 10090                     | x                             |
| Policies that prohibit the use of physical violence, intimidation etc.   | 1985                      |                               |
| Criteria for keeping records of disciplinary measures  | 20124                     |                               |
| Policies relating to security issues / role and behavior of security guards  | 30062                     |                               |
| Policies relating to privacy protection  | 30064                     | x                             |
| Other criteria relating to conditions of work  | 2006                      | x                             |
| Criteria relating to safety at work (ILO 184)  | 2001                      | x                             |
| Safety at work - legal compliance  | 2587                      | x                             |
| Electrical equipment safety  | 20106                     | x                             |
| **Criteria relating to policies in place for verification and maintenance of buildings safety  | 700404                    | x                             |
| **Fire preparedness (drills, equipment, signs& )   | 10108                     | x                             |
| Documented emergency management plan   | 10110                     | x                             |
| Publicly available evacuation procedures   | 800013                    | x                             |
| Emergency exists maintenance   | 800014                    | x                             |
| **Training on safety issues  | 2002                      | x                             |
| **Criteria on occupational health and safety, as defined in ILO 155  | 740206                    | x                             |
| Workplace safety   | 2004                      | x                             |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| **Safety equipment & personal protective equipment  | 2003                      | x                             |
| **Maintenance of safety of machinery, equipment and materials   | 30060                     | x                             |
| Emergency first aid kits  | 10112                     | x                             |
| Safety procedures for handling chemicals  | 2009                      | x                             |
| Monitoring of accidents records   | 10114                     | x                             |
| Training of workers on procedures to deal with accidents  | 60026                     | x                             |
| Regular medical checks  | 2008                      |                               |
| **Workers' access to safe drinking water  | 2005                      |                               |
| **Workers' access to decent sanitary facilities at work (showers/wc/changing rooms etc.)                                  | 2000                      |                               |
| **Workplace conditions (air quality, lighting, noise)   | 10116                     | x                             |
| Dormitories & canteens  | 10120                     |                               |
| Workers' entitlement to breaks (e.g. meal breaks)   | 10122                     | x                             |
| **Workers' access to basic medical services: Infirmary at production site / transportation to off-site medical facilities | 10124                     |                               |
|   |                           |                               |
| <b>Labor practices - Employment and employment relationships</b>  | <b>54</b>                 | <b>8</b>                      |
| Conditions of employment: general principle   | 2588                      | x                             |
| Existence of publicly available policy defining workers' rights   | 2010                      |                               |
| Criteria related to waivers/national exemptions to maximum working hours  | 800015                    |                               |
| Right to refuse overtime  | 20125                     |                               |
| **Overtime is voluntary and compensated   | 30068                     |                               |
| Criteria on the use of prison labor   | 10126                     |                               |
| Child labour legal compliance policy  | 30080                     | x                             |
| **Criteria relating to maintaining age records of workers   | 700407                    |                               |
| Child labour remediation policy (including assistance to child workers and their families)                                | 30082                     |                               |
| Criteria for hiring and employing young workers   | 11152                     |                               |
| Good conditions of work for young workers   | 800018                    |                               |
| Young workers working hours   | 800019                    |                               |
| Training programs for young workers   | 800020                    |                               |
| Young workers access to effective grievance mechanisms  | 800021                    |                               |
| Young workers trained on Occupational Health and Safety   | 800022                    |                               |



| Category   | No of indicators/category | Covered by compliance control |
|--|---------------------------|-------------------------------|
| **Criteria related to maximum working hours  | 1990                      | x                             |
| Criteria related to hours of work & overtime monitoring  | 11154                     |                               |
| Other criteria relating to the conditions of employment  | 1984                      |                               |
| Use of formal format or template for labour contracts to define all rights and obligations of workers                          | 1995                      | x                             |
| **Workers' compensation for medical costs in case of work related accidents  | 700405                    | x                             |
| **Workers' access to medical insurance   | 2007                      |                               |
| Human resources management: general principle  | 2640                      |                               |
| Employment / hiring practices - legal compliance   | 10130                     | x                             |
| Criteria on migrant workers' employment and contract management  | 800016                    |                               |
| Workforce reduction policies and practices - legal compliance  | 30070                     |                               |
| Criteria for payroll records and pay slips   | 10132                     |                               |
| Workers' performance assessment (for promotion, trainings& )   | 10134                     |                               |
| Illegal/excessive deductions or fees (incl. Recruitment fees)  | 10136                     |                               |
| Workers equipment costs (incl. uniforms).  | 10138                     |                               |
| **Retention of workers' documentation (ID, passport)   | 10140                     |                               |
| Criteria for the use of legally binding labour contracts in written form   | 1978                      |                               |
| **Scope of workers' rights and benefits applicable equally to all types of workers (full time, seasonal, part time, temporary) | 1982                      |                               |
| Distinct criteria related to home-workers  | 11142                     |                               |
| **Criteria for equal rights and benefits applicable to full time employees and workers and sub-contracted labour               | 30072                     |                               |
| Workers mobility and freedom of movement   | 740204                    |                               |
| **Fair and timely payment of wages   | 1981                      |                               |
| Pensions and social security benefits  | 1983                      | x                             |
| Criteria related to waivers/national exemptions to full scope coverage of social benefits for all employees                    | 800017                    |                               |
| Criteria related to transportation of workers to production site   | 11150                     |                               |
| **Principles and practices related to securing a Minimum Wage based on sector or region specificities                          | 1988                      |                               |
| **Principles and practices related to securing a Living Wage based on sector or region specificities                           | 1991                      |                               |
| Wage compensation issues and policies (forced days-of, lock outs, meetings outside pay-time& )                                 | 30078                     |                               |
| Paid leave: general policy (public holidays, annual leave, sick leave, casual leave)   | 1922                      |                               |
| 1 rest day off in 7-days period or more stringent policy   | 30076                     |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| **Specific criteria for maternity/paternity leave days  | 10146                     |                               |
| Specific criteria for special leave (sickness, marriage, paternity, family leave)   | 10148                     |                               |
| Criteria related to equal remuneration (ILO 100)  | 1994                      |                               |
| **Criteria related to child labor and minimum age (ILO 138)   | 1989                      |                               |
| **Criteria related to worst forms of child labor (ILO 182)  | 1979                      |                               |
| **Freedom of association (ILO 87)   | 1993                      |                               |
| **Collective Bargaining (ILO 98)  | 1996                      |                               |
| **No discrimination at work (ILO 111)   | 1987                      |                               |
| Criteria relating to safety at work (ILO 184)   | 2001                      | x                             |
| **Voluntary employment - No forced labor (ILO 29 & 105)   | 1986                      |                               |
|   |                           |                               |
| <b>Labor practices - Human development and social dialogue</b>  | <b>18</b>                 | <b>1</b>                      |
| **Criteria related specifically to non-discrimination based on gender   | 700409                    |                               |
| **Criteria related specifically to non-discrimination of persons with disabilities  | 700410                    |                               |
| Criteria for ensuring participation of women/minorities in management   | 11156                     |                               |
| **Criteria related to workers' access to training programs  | 1997                      |                               |
| Apprentice programs for young workers   | 11158                     |                               |
| Joint committees / trade unions / labour associations   | 2769                      |                               |
| **Specific criteria relating to the formation of workers representation in countries where freedom of association and collective bargaining is not supported by legislation | 700411                    |                               |
| Workers awareness of procedures and best practices  | 30084                     | x                             |
| **Policies and procedures to address workers' grievances  | 30086                     |                               |
| **Gender policies at work - general principles  | 30090                     |                               |
| Gender policies - family-friendly policies to increase the labour force participation of women  | 30092                     |                               |
| Gender policies - development assistance policies which promote the economic role of women  | 30094                     |                               |
| Gender policies - upgrading the status of and wages for traditional areas of women's work   | 30096                     |                               |
| Gender policies - incentives to women to develop their careers (e.g. specific training)   | 30098                     |                               |
| Gender policies - increased access to finance and support services for women entrepreneurs  | 30100                     |                               |
| Gender policies - integration of women migrants in labor force  | 30102                     |                               |
| Policies and procedures to monitor workers' satisfaction at work  | 30088                     |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Other criteria relating to empowerment of workers   | 4076                      |                               |
| <b>Other - SSCT Social</b>  | <b>5</b>                  | <b>1</b>                      |
| Criteria related to conflict minerals   | 800074                    |                               |
| Criteria related to compliance with all ILO core labour standards are verified by a third party                       | 800075                    |                               |
| Criteria related to forced and compulsory labour as defined in ILO 105  | 800076                    | x                             |
| Criteria related to requirements to train workers on labour rights  | 800077                    |                               |
| Criteria related to setting up policies or procedures to manage basic labour rights in the workplace                  | 800078                    |                               |
| <b>MANAGEMENT (Previously: Economic)</b>  | <b>53</b>                 | <b>3</b>                      |
| <b>Economic viability</b>   | <b>6</b>                  | <b>1</b>                      |
| **Business operations economic viability: general principle   | 2593                      |                               |
| Fair competition  | 30104                     | x                             |
| **Production efficiency / productivity  | 1971                      |                               |
| **Diversification of business operations  | 700413                    |                               |
| **Long term sustainability management plan / continuous improvement   | 10160                     |                               |
| Administration and management / business plan   | 2589                      |                               |
| <b>Sustainability Management Criteria</b>   | <b>23</b>                 | <b>2</b>                      |
| Environment and Social (E&S) Management Systems: general principles   | 24072                     |                               |
| Staff training on sustainability issues (environment, social, economic, quality, culture, health and safety...)       | 300451                    |                               |
| Criteria for assessing risks and impacts on water usage   | 300455                    |                               |
| **Criteria for assessment of risks and impacts on water levels of water resources used (surface and/or ground water)  | 700414                    |                               |
| **Criteria for assessment of risks and impacts on water quality of water resources used (surface and/or ground water) | 700415                    |                               |
| **Criteria for assessment of environmental risks and impacts  | 30106                     |                               |
| Criteria for assessment of risks and impacts on soil resources condition  | 300453                    |                               |
| Criteria for assessment risks and impacts on biodiversity in (as well as outside) management or production unit       | 300457                    |                               |
| Criteria related to environment and social risks mitigation and performance improvement                               | 30108                     |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Organizational capacity for continuous improvement of environmental and social (E&S) management (e.g. through Monitoring and Evaluation)  | 30110                     |                               |
| **Criteria relating to procedures to monitor and measure effectiveness of E&S management systems (e.g. social impact assessment)          | 30112                     |                               |
| ****Criteria relating to reporting on and making publicly available E&S management systems (e.g. annual social and environmental reports) | 701325                    |                               |
| **Criteria relating to emergency response plans or strategies to climate related hazards  | 701326                    |                               |
| **Criteria on evacuation safety procedure   | 740207                    | x                             |
| **Criteria relating to stakeholder analysis and engagement planning in E&S management systems   | 300454                    |                               |
| **Criteria relating to verification of mandatory certificates and permits (e.g. water use rights, land use rights, etc)                   | 700416                    | x                             |
| **Criteria relating to Occupation Health and Safety (OHS) management system   | 700417                    |                               |
| Criteria for establishing and making publicly available the management unit CSR policy  | 2647                      |                               |
| Criteria for establishing and making publicly available the management unit Internal Control System                                       | 2645                      |                               |
| Respect the natural or cultural heritage surroundings in siting, design, impact assessment, and land rights and acquisition               | 12254                     |                               |
| Use of locally appropriate principles of sustainable construction and maintenance of existing scenic sites                                | 12256                     |                               |
| Provision of access for persons or workers with special needs   | 22645                     |                               |
| Other criteria relating to administration and management issues   | 1966                      |                               |
|   |                           |                               |
| <b>Supply chain responsibilities</b>  | <b>24</b>                 | <b>0</b>                      |
| Market data and analysis  | 1960                      |                               |
| Supply chain stakeholders mapping   | 4074                      |                               |
| Access to financial services (payment, credit, savings, subsidies& )  | 1973                      |                               |
| **Criteria related to guarantee of premium on sales of certified product  | 1970                      |                               |
| **Criteria related to minimum price guarantees  | 700418                    |                               |
| Criteria for setting-up contracts with traders  | 1969                      |                               |
| **Criteria for inclusion of suppliers (sustainability strategy)   | 700419                    |                               |
| **Criteria for supply chain responsibility (beyond primary production)  | 700420                    |                               |
| Criteria for advance payments requests  | 1972                      |                               |
| Criteria relating to distribution networks and access to markets / buyers   | 1959                      |                               |
| Criteria relating to non-discriminatory lending practices   | 300463                    |                               |

| Category   | No of indicators/category | Covered by compliance control |
|--|---------------------------|-------------------------------|
| Criteria relating to lending practices promoting local entities  | 300465                    |                               |
| Criteria relating to access and selection of inputs and varieties (traditional versus improved/engineered)   | 300467                    |                               |
| Criteria relating to traceability of inputs / varieties and records of materials used  | 300469                    |                               |
| Criteria relating to access to technology and innovation   | 300471                    |                               |
| Criteria related to infrastructure (transport, storage, testing laboratories)  | 300473                    |                               |
| Criteria related to (responsible) intensification / expansion of cultivation or infrastructures  | 300475                    |                               |
| Criteria relating to monitoring / measure of customer / client satisfaction  | 10174                     |                               |
| Criteria relating to policies encouraging clients, staff and suppliers to consider sustainability issues (reduce GHG emissions, waste, water use...) | 300477                    |                               |
| Fair marketing based on factual and unbiased information   | 10176                     |                               |
| Criteria for group organization and management (for example cooperatives)  | 300479                    |                               |
| Distinct criteria related to subcontracting (disclosure of, prior approval, auditor's access to)   | 800023                    |                               |
| Criteria for local micro businesses/incubation/facilitation  | 10178                     |                               |
| **Criteria relating to setting up specific delivery times for suppliers and related possible sanctions for late delivery                             | 700421                    |                               |
|  |                           |                               |
|  |                           |                               |
| <b>ETHICS &amp; INTEGRITY</b>  | <b>24</b>                 | <b>6</b>                      |
|  |                           |                               |
| <b>Ethics &amp; Integrity</b>  | <b>24</b>                 | <b>6</b>                      |
| Ethics: general policy or set of principles  | 1955                      |                               |
| Corruption prevention and bribery: general principle   | 1954                      |                               |
| Anti-bribery - Procedures and risk-assessment  | 34000                     |                               |
| Anti-bribery - Political contributions   | 34002                     |                               |
| Anti-bribery - Charitable contributions and sponsorships   | 34004                     |                               |
| Anti-bribery - Facilitation payments   | 34006                     |                               |
| Anti-bribery - Gifts, hospitality and expenses   | 34008                     |                               |
| Anti-bribery - Due-diligence assessment of business partners, incl. subsidiaries and contractors   | 34010                     |                               |
| Anti-bribery - Staff/workers awareness, training and support   | 34012                     |                               |
| Anti-bribery - Internal controls, records keeping, M&E   | 34014                     |                               |

| Category  | No of indicators/category | Covered by compliance control |
|---|---------------------------|-------------------------------|
| Anti-bribery - External reporting and communication   | 34016                     |                               |
| Anti-bribery - Mitigation and corrective actions  | 34018                     |                               |
| Transparency across types of information obtained during audit (discrepancies between the interviews and types of records)  | 800024                    |                               |
| Audit Access: general policy (auditor's freedom of access to facility grounds, workers, production areas)   | 800025                    | x                             |
| Criteria related to denial of audit access (auditor prevented from fulfilling full scope audit requirements)  | 800026                    |                               |
| Criteria for monitoring / following-up on bribery/corruption allegations  | 10186                     |                               |
| Records keeping practices (allegations / fraud / grievances /historical fines& )  | 10188                     | x                             |
| Criteria relating to verification of business license and legality of activities / settlement   | 10851                     | x                             |
| Criteria relating to intellectual property or customer information protection   | 800027                    |                               |
| Compliance to International Conventions is required and assessed regardless of official ratification by the country of operations   | 1953                      |                               |
| Compliance to national and regional environmental laws and regulations  | 34020                     | x                             |
| Explicit policy or set of criteria addressing cultural and religion rights  | 2585                      |                               |
| **Obligation to comply with relevant local, regional and national laws and regulations (including legal land tenure, title, having legal rights to use the production or management unit) | 4071                      | x                             |
| Compliance with local zoning and protected or heritage area regulations and laws  | 12252                     | x                             |